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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY
(INCORPORATED).

VOL. XXVII.

CHICAGO, ILLINOIS, NOVEMBER 15, 1908.

No. 5.

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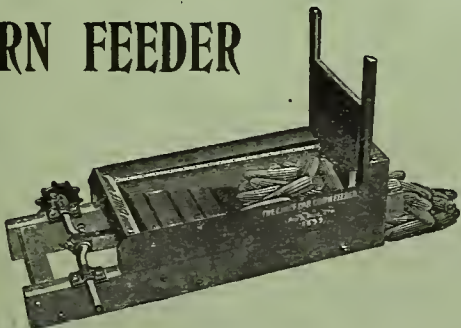
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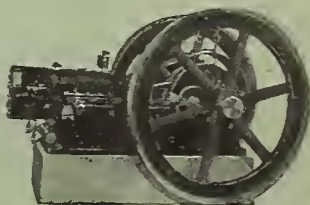
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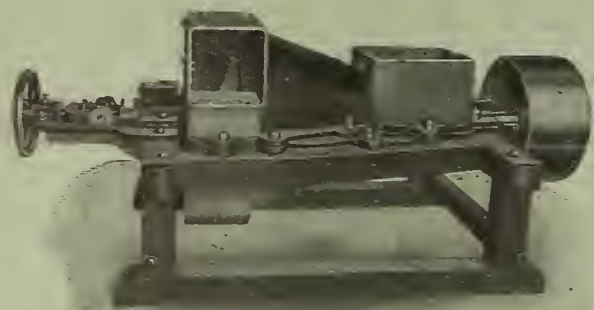
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The Ohio Fan Discharge Corn Sheller



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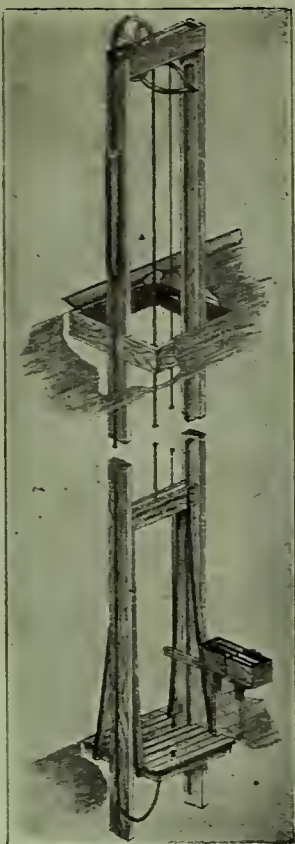
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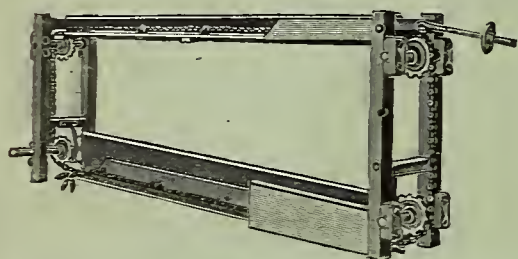
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Both Style Shellers, 300 to 1,500 bu. per hour

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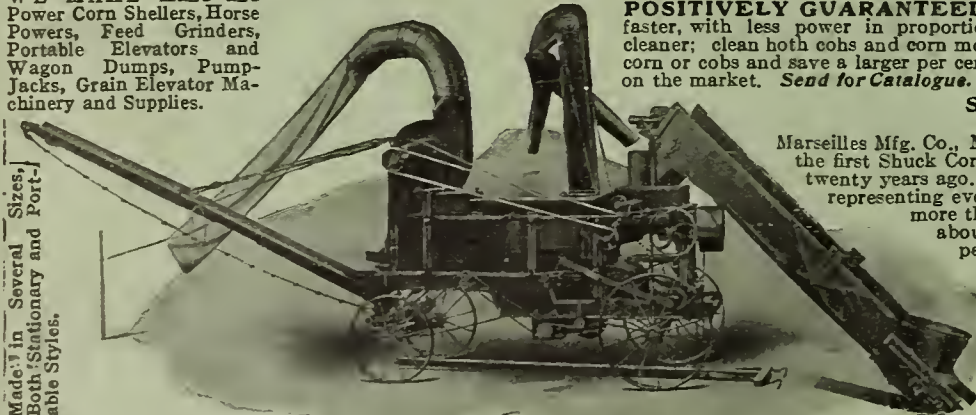
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faster, with less power in proportion to capacity; take the corn off the cobs
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thoroughly; save it more completely; clean
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perfectly; require less power in proportion
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and cost less, loss of time and cost of re-
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have ever used. We have thrown out
every other kind of Corn Sheller we ever
bought and have replaced them with
yours. KEEL & SON. By J. Z. Keel.

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BURRELL Improved Manlift



This lift is so well
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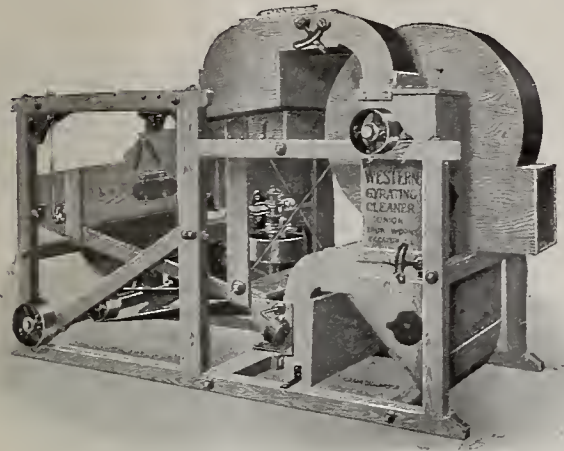
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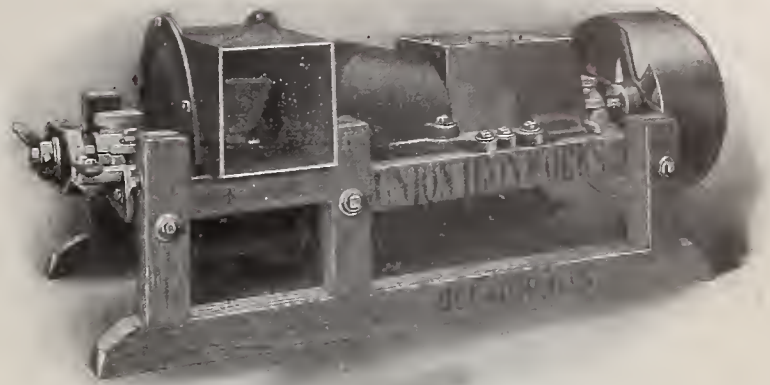
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THE WESTERN GYRATING CLEANER

Made in seven sizes. Capacities from 200 to 1,800 bushels per hour.

- Rotary motion.
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Made in three sizes. Capacities 300 to 1,300 bushels per hour.

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A complete line of Elevator Equipment—Plans and Specifications furnished.

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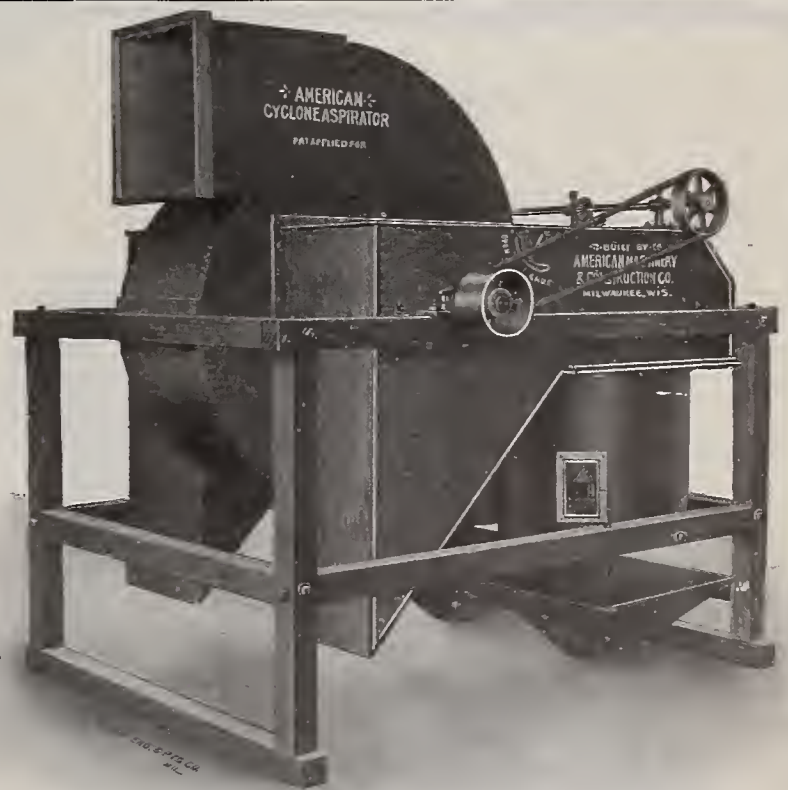
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does Pneumatic Cleaning only and is used to separate from grain all impurities which are lighter than the material to be cleaned.

For separating sprouts, chaff and dust from the malt as it comes from the kilns, this machine has no equal.

In mills it will prove itself the best machine for taking all the chaff, dust, etc., out of the grain.

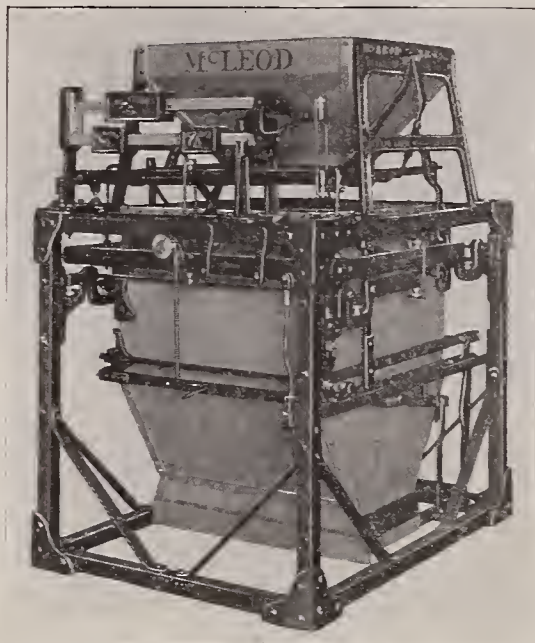
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NOTE—The McLeod Automatic Scale was formerly made under lease of our patents, by a company at Peru, Ill., but this lease terminated July 17, 1907, and anyone buying a McLeod Scale from any firm except ours will be liable to us for a royalty.

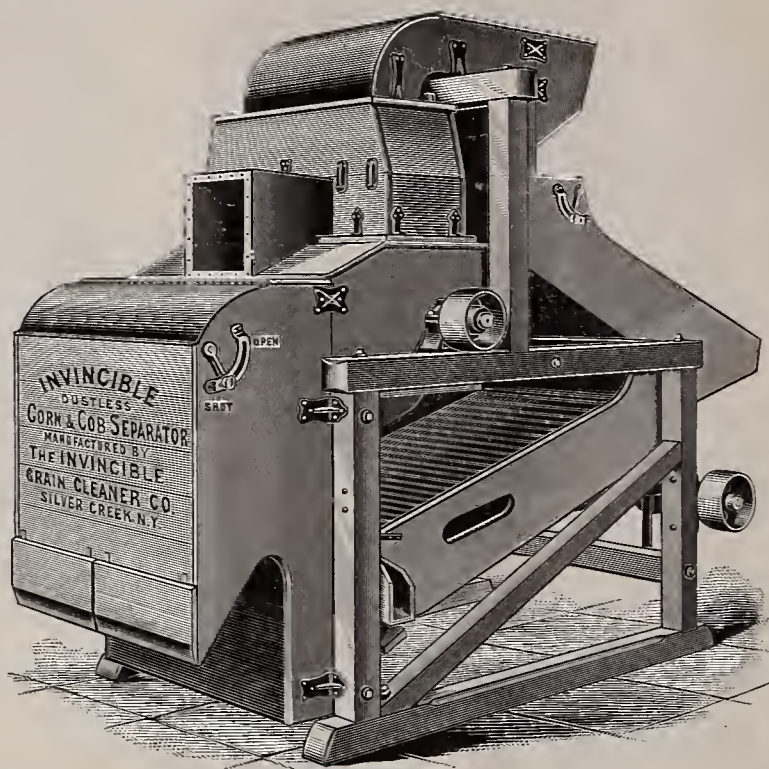
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CLEAN YOUR CORN

This Separator takes out cobs, silks and all foreign matter and gives a high grade of corn.

It is the most popular corn and cob separator on the market, the result of its extremely nice work. Order now.

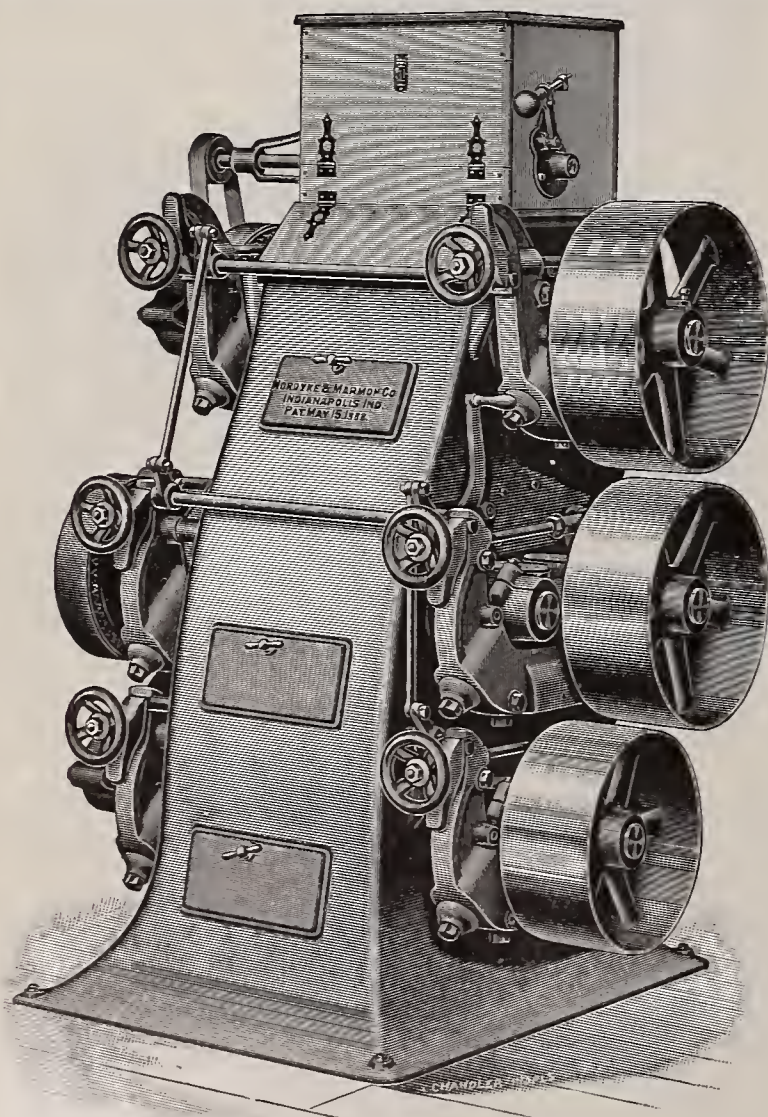


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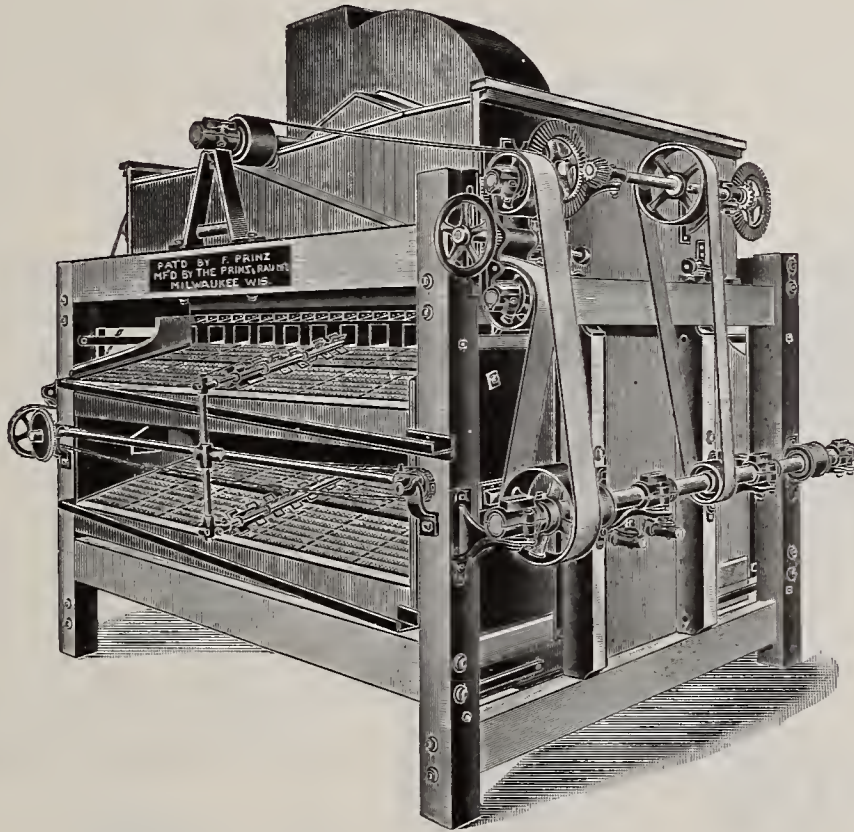
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PRINZ AUTOMATIC SEPARATORS

The Machines that have Revolutionized the Grain Cleaning Business



PERFECT CLEANING—DURABILITY—EASE OF REGULATION

The screens are of sheet steel and retain their shape under hard usage. Each sieve has a seed screen at head.

The grain is spread the entire width of sieve by a perfect automatic feeder.

The sieves are kept perfectly clean all the time by our patented automatic traveling cleaner.

A strong, steady suction is created by a large slow-running fan.

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Show the value of any number of bushels or pounds of **WHEAT, RYE, OATS, CORN OR BARLEY** at any given price from 10 cents to \$2.00 per bushel. One of the most useful books ever offered to millers. Indorsed by prominent millers and grain dealers. Bound in cloth, 200 pages. Mailed on receipt of price.

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322 Fourth Ave. South, Minneapolis, Minn., having bought the complete stock of C. D. Holbrook & Co., are now located in the old Holbrook location at 305 South Third Street, where they will continue the business of furnishing the grain trade with

Elevator and Mill Machinery, also Avery Automatic Scales and Charter Gasoline Engines.

WE SOLICIT YOUR ORDERS.

305 South Third St., Minneapolis, Minn.

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YOU NEED A

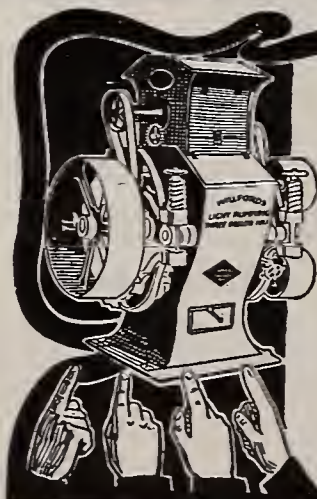
HESS U. S. MOISTURE TESTER

Test all your new corn and avoid paying corn price for water. Anyone can operate it. Burns gas, gasoline or alcohol. Free Booklet.

Ask us about **grain driers** also, and remember that

HESS-DRIED IS BEST DRIED.

Hess Warming & Ventilating Co.
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4 GOOD POINTERS

ON THE

Willford Three-Roller Feed Mill.

- (1) It is Easy to Handle.
- (2) It is Strong and Durable, but Simple.
- (3) It will Grind the Most Feed with the Least Power.
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To equip your Grain Elevator Building with our light self-lifting passenger lifts. Strong and substantially made.

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No more work climbing stairs. Cost no more than stairways and take up one-quarter the room. Correspondence Invited.

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From 3 to 30 H.P.,
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ROCKFORD ENGINE WORKS
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The Engine that
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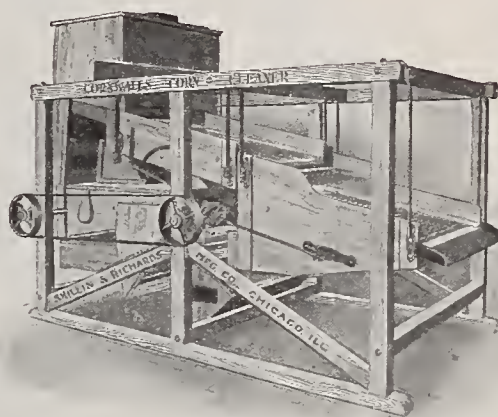


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The Victor Corn Sheller and Cornwall Corn Cleaner are standard machines of their class. These machines will enable you to handle the crop to best advantage. For efficiency, capacity, strength and durability they have no equal. They possess valuable features possessed by no other shellers and cleaners. We also make other shellers and cleaners and a complete line of Feed Mills, Separators and Elevator Supplies. Send for latest circulars.

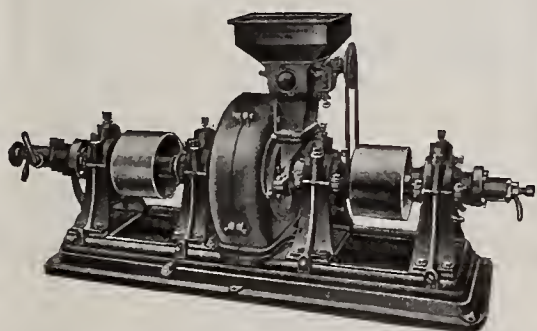
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Builders of Elevator Machinery and Supplies
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Turn Your
Surplus Power
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By Installing a



Monarch Attrition Mill

and grinding feed. This is a legitimate side line for elevator owners and one which offers profitable returns. BUT YOU MUST HAVE THE RIGHT KIND OF MILL. The Monarch is made in sizes to suit all requirements and we have just the mill for your capacity. We have a mill that will enable you to grind feed the way your customers want it. Our mills grind any feed material and they do it fast—in other words, large capacity for the power used.

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Dries the grain uniformly and extracts any percentage of moisture desired.

Most economical, dries continuously, inexpensive to adopt.

Cools hot grain.

Built in capacities of five bushels to any quantity.

Satisfactory Results Guaranteed

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Grain Cleaners
Oat Clippers
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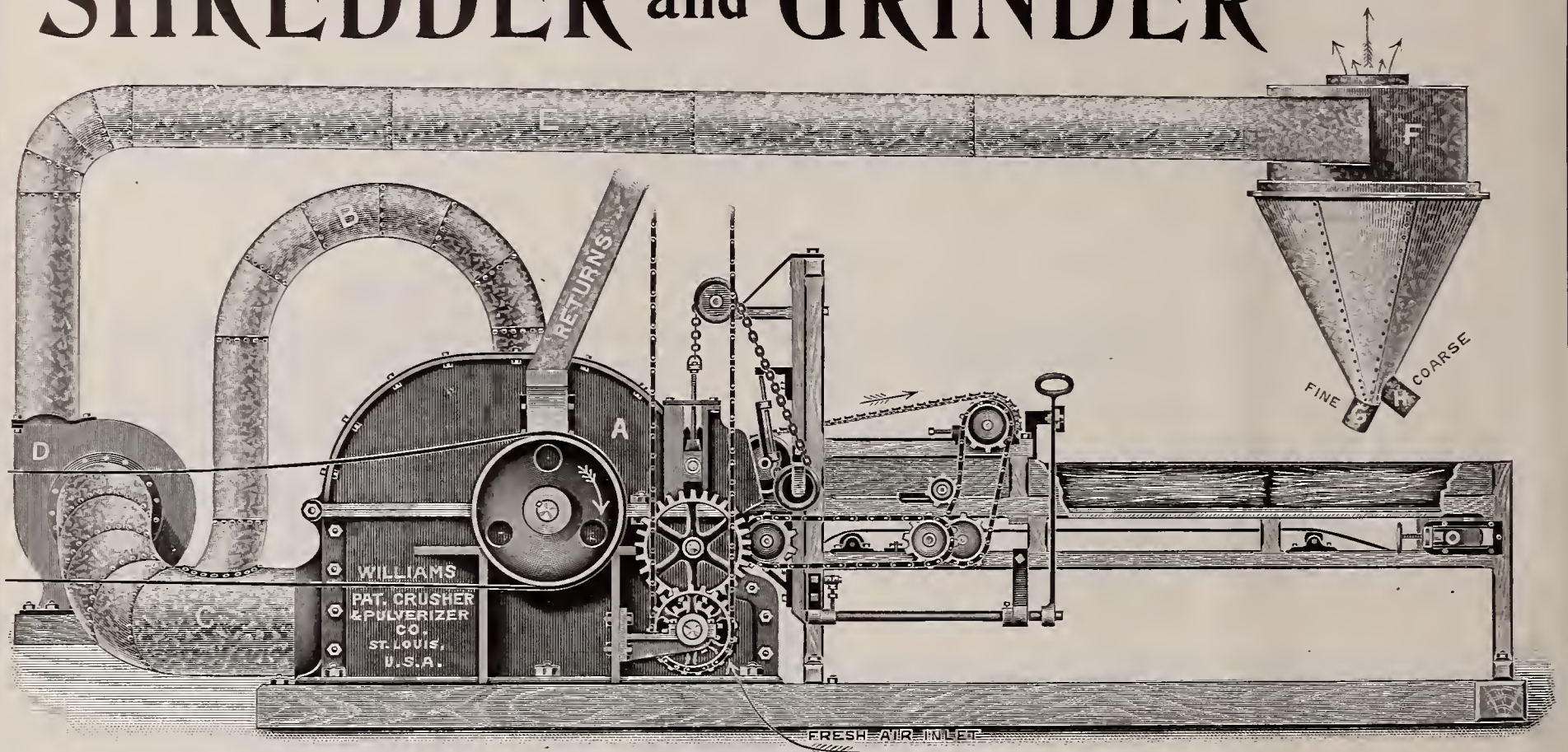


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THE ONLY VERSATILE FEED GRINDER EVER PRODUCED

They will reduce EAR CORN with the HUSK on.
 They will reduce ALFALFA HAY from the BALE or from the STACKS.
 They will reduce ALFALFA HAY and EAR CORN together.
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They will reduce ANY FORAGE material or CEREAL, together or separately.
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 They WILL GIVE DOUBLE THE CAPACITY FOR THE POWER EXPENDED AND COST FOR REPAIRS OF ANY KNOWN GRINDER ON EARTH.

We have a corps of competent milling engineers in the field making estimates and taking contracts for the installation of complete alfalfa meal plants, from the stump up.

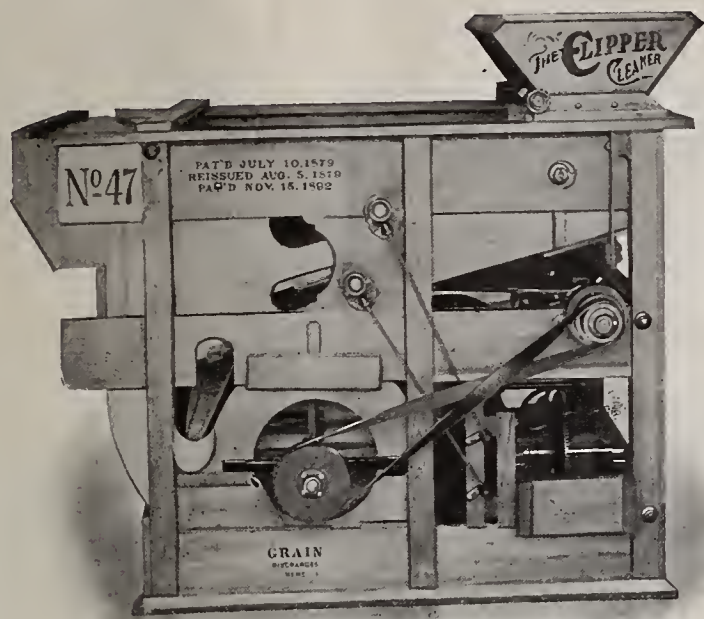
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Automatic Hay, Meal and All Around Feeder.

Oklahoma Representative: Chas. A. Tappan, 217 W. Reno St., P. B. 1268C, Oklahoma City, Okla.
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The No. 47 Clipper Cleaner

is unequalled for handling seeds or grain in local elevators. This machine has Traveling Brushes on the screens, which enables you to keep it working to its full screen capacity all the time. It is very light running, strongly built, easily installed and simple in operation. We guarantee this Cleaner to give perfect satisfaction on clover seed, timothy or any kind of grain, and it can be operated with

one-fourth the expense for power of any suction cleaner on the market. It will not require over one-half of one horsepower on clover or any kind of seed, nor over one horsepower on grain. If you are looking for a first-class, up-to-date cleaner of moderate capacity, we would be glad to send you catalog and give prices and particulars upon request.

A. T. FERRELL & CO., Saginaw, W.S., Mich.



CONSTANT MACHINERY

IS WHAT YOU WANT

THE SAFETY MAN-LIFT

has roller bearings, which makes it easily operated. The improved brakes and safety catch prevent accidents. The adjustable counterweights and springs make it all that could be desired. Buy ours; it pays.

THE B. S. C. CHAIN FEEDER and DRAG

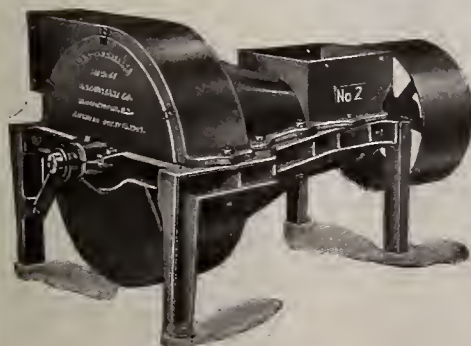


for feeding elevator boots and shellers, any capacity, any distance, automatically. Handles all kinds of grain without waste or mixing.

The ONLY WAY to feed a sheller.

THE U. S. CORN SHELLER

Patented Oct. 17, '05.



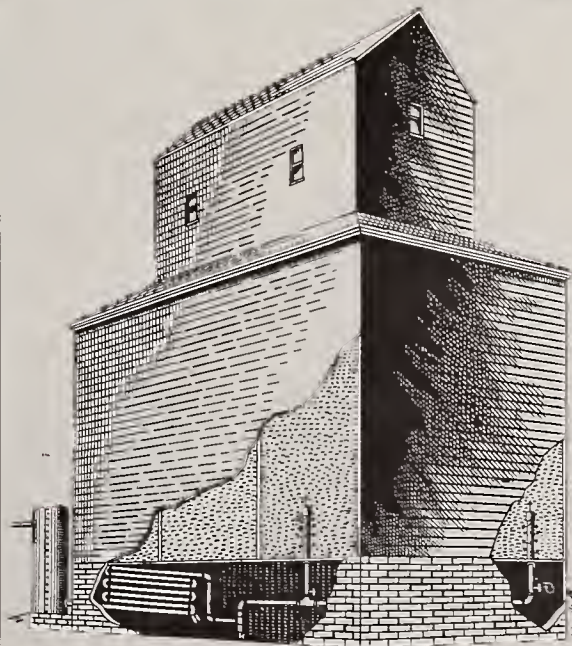
No pit or lower hopper. Cheapest installed. Quickest repaired. Our new Screw Adjustment can be used while sheller is full of corn and running. Shells clean, saves cobs. TRY IT.

Write for our catalog or you may miss something good

B. S. CONSTANT CO., Bloomington, Ill.

Johnson's Grain Dryer and Renovator

A Pneumatic Process for Cooling and Drying Grain Without the Use of Heat or Chemicals.



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E. G. Isch & Co.,
Peoria, Ill.

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Very truly yours,
Geo. D. Montelius & Co.

The Johnson Dryer and Renovator

may be installed in any Elevator, Corn Crib, Oat or Wheat Bin, Car, Boat, Steel or Cement Tanks or any Grain Receptacle. It can be placed in basement, engine room or elsewhere and will not increase your insurance.

It will make you money.

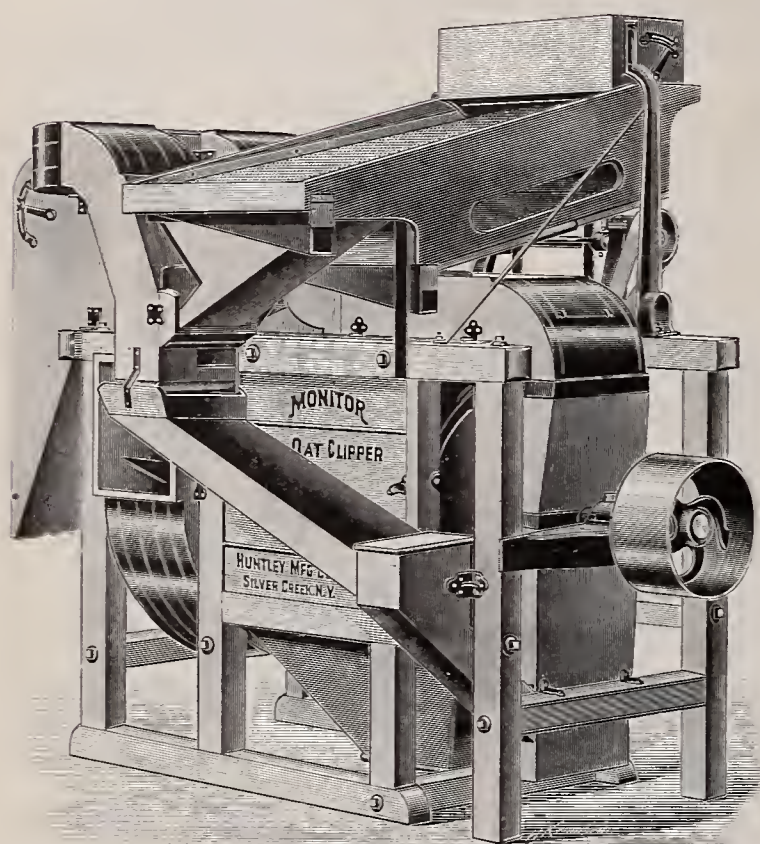
E. G. ISCH & CO., Manufacturers
PEORIA, ILL.



Well Known The World Over
Monitor Grain and Seed Cleaners



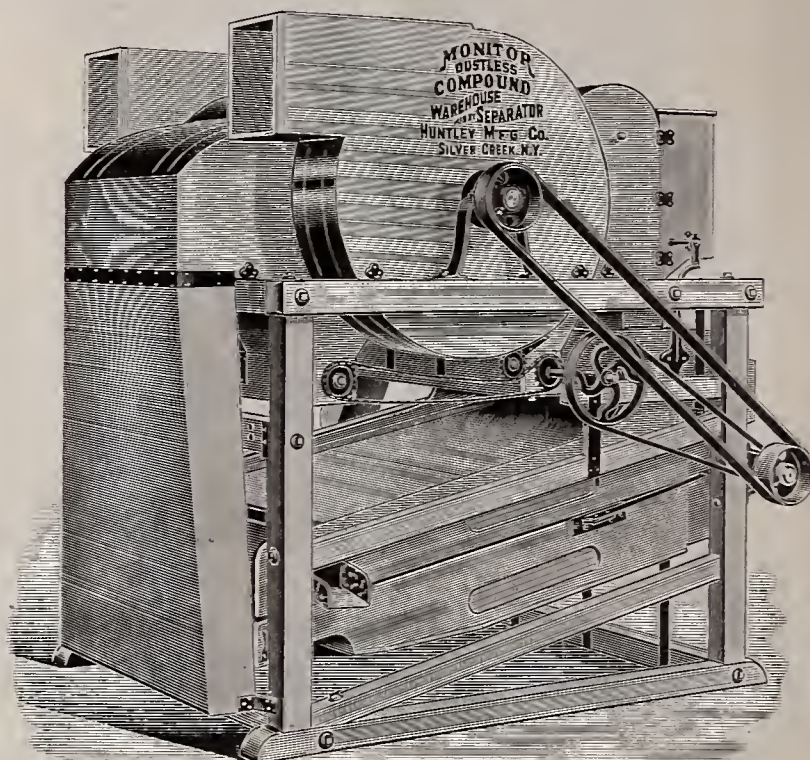
We are the world's largest manufacturers of grain and seed cleaning and grading machinery.



The Monitor Combined Clipper and Cleaner

Used as an oat clipper, this machine gives perfect results on any class of work. For use as a receiving cleaner, the "by-pass spout" is attached, giving two screen and two separate air separations.

As a combined clipper and cleaner this machine has no equal.



The Monitor Counterbalanced Elevator Separator

This machine is equipped with our new improved style of deep reservoir ring oiling bearings, patented automatic disc-oiling eccentrics, air equalizing device and automatic sieve cleaning attachment. Undoubtedly the most successful cleaner on the market.

CONSULT WITH US

when you are ready to consider what you require to improve your cleaning outfit. Our latest descriptive catalog should be in your hands.



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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

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ELEVATOR SITE RENTALS.

"The railroads of Iowa," says Secretary Wells in a late bulletin, "seem to have given up entirely the old idea of charging a nominal rental for the land required for elevator sites and have accordingly resurveyed their station grounds into parcels of certain dimensions, and a rental price of \$5 for each parcel is fixed thereon, and the amount of rental paid by the lessee depends on the number of such parcels leased by him. The Chicago, Milwaukee & St. Paul Railway has fixed \$5 as the minimum price for each parcel and a general charge of 5 per cent on the appraised valuation of the property, thus making the rental exceed \$5 per parcel in many cases, in addition to which the dealers are required to pay all local taxes and assessments against such property."

The leases further specify that the lessor shall in no case be held responsible for loss or damage to elevator property by fire, a provision which the attorneys of the Iowa Association claim is a valid one so long as the railroads do not put the rental of elevator sites on a revenue basis by charging more than a nominal rental. "In such case," say the attorneys, "the legislature would have power to enact that the provision in the lease limiting the liability of the railway company for damages to such elevator property, caused by act or negligence of the railway company, should be void."

Consul Jas. W. Ragsdale of St. Petersburg reports to this Government that a special committee has been appointed by the Russian Minister of Trade and Industry, consisting of representatives of the ministries of trade and finance, ways

of communication and state control, for the consideration of the project of a Russian engineer to build a system of elevators and warehouses for grain along the Siberian railway, the object being to store grain exported from Siberia abroad at fixed places where it can be held for prices in the international market. It is expected that

A TEXAS ELEVATOR.

Of the potential agricultural wealth of all Texas there is no measurable limit, and every year from now on, as its unoccupied lands are cut up into more and more farms, the volume of its products from the soil ought to, and no doubt will, increase. In the northern-central portions of the state especially there is already an immense production of the cereals and cotton, whose handling requires all the facilities of the longer settled and more crowded surplus grain states of the North. Here we find some of the greater cities of the state, like Dallas and Fort Worth, and many lesser growing towns, among which must be reckoned Weatherford, in Parker County, just west of Fort Worth.

Our illustration is of one of the important business concerns of that little city, the grain elevator and warehouse of Hartnett & Bradfish, grain merchants as well as dealers in mill products, hay, seeds, feeds, wood and so on, a business started in 1903.

The building shown in the engraving was completed in March last. The elevator section is 30x32 feet in size and 78 feet



ELEVATOR AND STORAGE SHED OF HARTNETT & BRADFISH, WEATHERFORD, TEXAS.

foreign capital will be interested in the enterprise.

A colored Southern minister is reported to have said: "In that great day they will divide the sheep from the goats; and, bress the Laud, we know which wears de wool." These are times when "color" counts. In corn just now the most aristocratic No. 2 White is selling here at 6 cents discount from No. 3 Yellow, and "poor white trash" is not wanted at 7 cents discount. The South has a fine crop of corn, while New England is bare.—Pope & Eckhardt Co., Oct. 31.

high above the basement. It has bin capacity of 16,000 bushels, the bins running from basement to top of the main structure.

The warehouse is 70x30 feet in size, giving storage room for ten carloads of products.

The equipment includes a 40-horsepower electric motor, 300-bushel Fairbanks Hopper Scale, one Richardson Automatic Sacking Scale, 22-foot wagon scale and two small platform scales, two stands of 2-high rolls (9x24-inch and 9x18-inch) for making chop and grinding corn meal; one Eureka Clipper and Cleaner, with gravity feed

from car and wagon dump to main elevator boot. The unloading capacity is 1,000 bushels per hour; grinding capacity, 150 100-pound sacks of corn chop and 60 bushels of cornmeal per hour.

Hartnett & Bradfish conduct here a large coal and wood business, as well as buy and sell hay.

The premises illustrated are situated on Fort Worth Street, between the Texas & Pacific and G., C. & S. Fe tracks, while the main business offices and salesroom of the firm are at Bridge and Main Streets, in the center of the business section of Weatherford. At this salesroom they have storage capacity for twenty cars of stuff; and here, too, the firm conducts its large business in field and garden seeds which are stored here rather than at the elevator. Field seeds are made a specialty, notably seed oats, wheat and rye. They are heavy buyers also of kaffir corn, milo maize and other products.

INSTITUTE OF AGRICULTURE.

Arrangements have been completed for sending the delegates to represent the United States at the forthcoming meeting of the International Institute of Agriculture at Rome, the plans for which, as it now appears, have been somewhat changed by the committee on organization in session during October, and which, moreover, are somewhat different from those proposed by Mr. David Lubin of California, to whose initiative the Institute owes its existence.

The original idea was that of a body which should secure data from all sources with reference to farm products, their yield and probable price, and should disseminate these among all the nations of the earth in order to render the prices of staples uniform and enable the farmer to get what was supposed to belong to him. Mr. Lubin has a plan for publishing comparative data on freight rates from producing regions to grain and produce markets for the purpose of informing the farmer what he could sell his crops for, in order to render him independent of the grain dealer or middleman. Officials of the Department of Agriculture, however, apparently have no use for Mr. Lubin, and now speak of the Institute as a great school of research, to which delegates could be sent from our own agricultural colleges to get instructions in systems of agricultural science, methods of farming and the like.

The new plans appear to have eliminated some of Mr. Lubin's ideas, and correspondents in sympathy with the Agricultural Department and drawing their inspiration therefrom say that it is likely that the Institute will develop simply into an international agricultural statistical association. The important principle will be laid down and accepted that the Institute is to use no material that it does not get from the governments which compose it. In other words, its information will be official or it will not be used at all.

The telegraphic system of crop reports planned by Mr. Lubin, with correspondents scattered all over the world, has been completely thrown overboard. This, as we are told, "has been done at the instance of some of those who have been looking seriously and soberly into the situation, and have been desirous of avoiding an outcome that would render the participants in the Institute ridiculous."

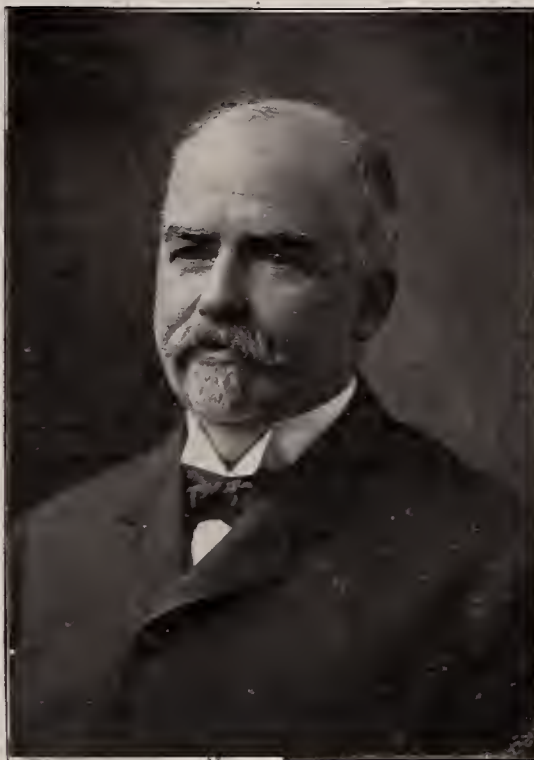
In quantity the 1908 corn crop will not exceed the 1907 estimate. It will be far above in quality. The Government placed the 1907 merchantable quality at 77.7, about the lowest ever known. The quality of the 1906 crop was 89.1, and the ten-year average is 84.2. The 1908 crop quality is above the ten-year average. The new corn will thus condition swiftly and pass rapidly into consumption. The time of year is near when the corn raiser is accustomed to receive large amounts of "new corn money." No matter how much the grower might gain by holding, present

prices are amply remunerative and tempting.—E. W. Wagner.

DEATH OF FRANK M. PRATT.

Frank M. Pratt, for a number of years treasurer of the Illinois Grain Dealers' Association, and one of the more prominent grain men and corn millers of the West, died suddenly at Houston, Texas, on November 9. Diabetes was the cause of his death.

The death of Frank M. Pratt removes a man who for more than twenty years was one of the most active and aggressive grain men in the state of Illinois. He was a pioneer in building up the grain trade of Decatur, being largely instrumental in the establishment of the first transfer elevator in that city and in the building of the corn mills at that place. Mr. Pratt was also greatly interested in the civic and social life of Decatur, aiding materially in building religious and philanthropic institutions. He was at one time president of the Decatur Club, and was one



THE LATE FRANK M. PRATT.

of the prime movers in the organization of the Decatur Country Club.

Frank M. Pratt was born on January 21, 1853, in Litchfield County, Connecticut, residing there with his family until 1874, when all removed to Decatur. Upon going to Decatur he first engaged in the grocery business with his father, later entering the grain business with his brother, R. E. Pratt. The brothers met with success from the start, and in 1888 they opened a branch house in Chicago, and in 1890 one in Buffalo, N. Y. In the same year they built the Union Transfer Elevator at Decatur, and four years later erected the cereal mill at East Decatur, which was consolidated in 1902 with a number of similar plants, forming the American Hominy Co. Thereupon Frank M. and Ralph E. Pratt formed the Pratt Cereal Oil Co. with a capital stock of \$600,000 and built a large plant. Unforeseen contingencies interfered with the success of the company and it was later turned into the Wellington Starch Co. At this period Mr. Pratt served for several years as treasurer of the Illinois Grain Dealers' Association and by his efficient administration earned a well-deserved popularity among the grain men and those in other lines throughout the state. About four years ago Mr. Pratt became interested in the South and moved first to New Orleans and later to Houston.

In 1876 he was united in marriage with Miss Mary J. Boyer of Oreana, Ill. Two children survive, Mrs. Helen Vance of Kankakee, Ill., and Charles F. Pratt of Houston, Texas. Three brothers and three sisters also survive. M. B. Pratt of Frankfort, Ind., Ralph E. Pratt of Chi-

cago, Riley Pratt of Buffalo, N. Y., Mrs. Geo. T. Tucker, Miss Abbie Pratt and Mrs. H. I. Baldwin of Decatur. Burial was in the family lot at Decatur.

ANOTHER GRAIN FIND.

Rice corn is a new cereal introduced to the farming world of Kansas by J. W. Holey of Lawrence. He calls it Australian Rice Corn. It grows on a stalk much like that of kaffir corn and branches out into a beautiful white and golden head of seed. It produces more than twice the amount of seed to the head as any of several samples of very fine kaffir corn, showing the difference between the two. The seed looks very much like rice, from which the cereal gets the name of rice corn. It is a grain and not a forage crop. It is very light when popped and it is said to be almost equal to rice for cooking.

Mr. Holey gives the following history of his find: "In the fall of 1905 I received, through the California Experiment Station, 9 grains of what they called California wheat, said to have originated in Australia. From these 9 grains, planted in the spring of 1906, I raised 56 heads, which thrashed out one and a half gallons of shelled corn. In the spring of 1907 I planted about a quarter of an acre which produced nearly 100 bushels of seed. This last spring I planted two acres, which I have not thrashed yet, but it will turn out better than any previous crop in proportion, considering the season, which was very wet, and the fact that I could not give it my attention when it was needed.

"It is a grain and not a forage crop. It will produce more seed than any of the cane or sorghum family and I believe that I am justified in saying that it will produce double or twice the amount of either white or red kaffir corn, regardless of poor soil and careless cultivation."

NEW G. T. P. ELEVATOR AT TIFFIN, ONT.

On October 26 the new 2,000,000-bushel elevator of the Grand Trunk Pacific Terminal Elevator Co. at Tiffin, Ont., was opened to receive grain. Work has been in progress on the new elevator since the spring of 1907.

The house is fireproof throughout, constructed of concrete and steel. There are seventy-two cylindrical storage bins, covering a space 288x144 feet. The foundation and the walls to the top of the bins are built of reinforced concrete and the floors and roof are of the same material. The story above the storage bins, the cupola of the working house, the track shed and the marine towers are constructed of structural steel and covered with corrugated sheets. There are two, marine legs, operated through movable towers, which will permit of the very rapid unloading of boats at the dock. The scale on the weighing floor has a capacity of 400 bushels. The plant will be run by electric power, which is supplied by an equipment of alternating-current generators of 1,200 horsepower. The safe and absolutely fireproof construction of the elevator reduces the possibility of damage to the minimum and insurance rates will be considerably lowered.

RAILROADS AND SHIPPERS' CLAIMS.

The Traffic Bureau of the St. Louis Merchants' Exchange has published the information that it has been advised by the Western railroads in which St. Louis shippers and receivers are interested have agreed to treat on their merits all claims for loss and damage to grain in transit. This means that losses through stealage or because of defective equipment, hitherto given rather scanty attention, will be properly considered, and that no "natural shrinkage" deductions shall be made when settling claims.

The Texas rice farmers, at a meeting on November 2, named \$3.50 as the minimum price they would accept for rough rice.

GRAIN EXPORTS FROM GERMANY.

The title sounds like a paradox, or like a continental version of the celebrated essay on "Snakes in Ireland;" but, in fact, it is true that there are grain exports of native-grown German grain, wheat more especially at this time. And this is true, despite the recent vigorous pronouncement of the Dresden Chamber of Industry on the high price of bread and its causes, and of the complaint of the Berlin Chamber of Commerce of the "general dearth of victuals." In Dresden the price of bread, made of a mixture of rye and wheat flour, was early in August equal to 15 cents per 4-pound loaf, not quite as high as the Chicago price of common "bakers' bread" at the retail stores, but fully 25 per cent above the cost of the very best household bread in London. As the Dresden Chamber estimates that one-fifth of the German workman's wages go for bread alone, the inevitable corollary would be that "any rise must bring fresh unrest and strife into industrial life."

Now Germany imports on an average 72,000,000

exporter of wheat and rye is not bound to import an equivalent amount of foreign wheat or rye, but receives an import permit which he can utilize for the payment of import dues on other articles than wheat or rye.

FIRE IN DENVER.

The elevator of the Hungarian Flour Mills Co. of Denver, Colo., was badly damaged, in fact, all but destroyed, on October 21, causing an enormous loss. The cause was an incendiary.

The fire was discovered by a patrolman, who saw two men skulking in the shadow of the elevator about 1 o'clock a. m., who, when ordered to halt, ran away, with the police after them. When the chase had proved fruitless, it was seen that the interior of the elevator was in flames, with the fire bursting from the windows and exits in several places. Within twenty minutes a portion of the walls fell in and soon others followed, completing the ruin of the elevator.

There were 750,000 bushels of wheat in the house, worth \$1 a bushel, while the elevator



ELEVATOR OF THE HUNGARIAN MILLS, DENVER, COLO., AFTER THE FIRE.

bushels of wheat annually, but during the first half of 1908 she exported from 1,600,000 to 2,400,000 bushels of native wheat. This wheat is not unlike "the average English red, both in appearance and milling quality," says Milling, which was sold in October at \$1.74 per cental, say \$1.05 per bushel, ex-store, in Liverpool, while the price in Germany of native wheat was about \$1.29 per bushel. The difference is made up to the exporter, however, by the government allowance of a drawback of the full duty on imported wheat when the native grain is exported. The permits to export given to importers are transferable in a manner somewhat similar to the acquit system of exporting flour against imports of wheat, which was permitted in France a few years ago, and these certificates are bought and sold at a price which varies with the state of the import and export market. The present duty upon wheat imported in Germany is equal to 36 cents per bushel. In Berlin on October 8 standard native wheat for December delivery was worth about \$1.35 per bushel, but wheat grown in the maritime provinces would probably have a slightly less market value. The price of duty-paid Plate wheat in Hamburg about the same time was a little over \$1.50 per bushel.

The same system with intricate and ingenious modification enables the German port miller also to export high patent flour in competition with American, a trade that is stimulated by exceptionally low grain freight rates from the interior, which helps also to deplete the German interior markets of grain.

The interior German milling interests complain of the unfairness of the drawback because the

itself was valued at \$75,000. The loss is partially covered by insurance.

OPPOSES ELEVATORS.

In accumulating data for the use of the government, which is now studying the problem of handling its wheat in bulk or bags, the Agent-General of New South Wales asked the opinion of the Chamber of Commerce at Hull, England, and learned that that body would "make strong objections" to such proposal. In fact, as he was informed, several Hull grain merchants were "all most emphatic in their opposition to the use of elevators," because "it would be more expensive and would cause some amount of disorganization of trade." [Commend us to this for dear, old English "conservatism"!] It appears that a large proportion of the grain imported at Hull is discharged from the ship into river craft in bulk after being weighed in the sacks (or other receptacles) on the deck of the arriving ship.

Governor Warner of Michigan has appointed a committee, comprising some of Michigan's leading business men, to investigate the losses of the fire sufferers in Northern Michigan and to have charge of relief work. It is the opinion of the committee that \$150,000 will be necessary to care temporarily for the sufferers in the region of Alpena, and on the Mackinaw division of the Michigan Central Railroad. Farmers will be carried through the winter. The committee is Frank Buell and E. M. Wyncoop of Bay City, W. B. Roberson of Alpena, J. D. Hawkes of Detroit and J. A. Heath of Lenox.

DOCKAGE AT BALTIMORE.

The Baltimore Chamber of Commerce on October 29 filed a complaint with the Interstate Commerce Commission, the purpose of which is to bring before that body, squarely and independently and for the first time in its history, the matter of scale deductions, commonly called "elevator dockage" in the West. The railroads entering Baltimore (that is to say, the B. & O., Pennsylvania and Northern Central roads) had filed tariffs in October to take effect November 16, which provided that in pursuance of notice given the Chamber of Commerce by letter on September 28, by Jas. C. Brown, manager of the B. & O. Grain Elevator, and C. R. Kendig, superintendent Central Elevator Company (Pennsylvania Lines), said roads would make the following deductions from the scale weights of all grain unloaded at these elevators:

Export Elevators.—Wheat, oats and rye.—All cars weighing 66,000 pounds or less, 30 pounds; same, weighing over 66,000 pounds, 50 pounds; same, water-borne, 100 pounds per 1,000 bushels.

Corn, natural mixed, No. 2 white and yellow.—All cars weighing 66,000 pounds or less, 90 pounds; all cars weighing over 66,000 pounds, 100 pounds; water-borne, 100 pounds per 1,000 bushels; less quantities in the same proportion, with a minimum of 50 pounds.

Corn, other than above grades.—All cars weighing 66,000 pounds or less, 90 pounds; all cars weighing over 66,000 pounds, 150 pounds; water-borne, 150 pounds per 1,000 bushels; less quantities in same proportion, with a minimum of 75 pounds.

Local Elevators.—100 pounds per car on all cars.

These deductions were published to remain in force and effect until July 1, 1909, "when the grain in the elevators will be weighed to ascertain if the above scaleages are sufficient for the protection of the elevators, and will be subject to change, either by reduction or increase, as the results show."

Very naturally, when other terminals, several handling vastly more grain than annually goes through the elevators at Baltimore, are abandoning these scaleages, the Chamber of Commerce saw in this movement there what would prove a serious handicap to that market. The incorporation of the deductions in the rate was unusual, but it gave the Chamber of Commerce an opportunity to attack the practice in a manner not heretofore attempted and, therefore, to present the question in a way most interesting to the trade.

The complaint, having shown that the Chamber of Commerce and the defendant railways and elevator company are legal corporations; that the elevators in question and those of the B. & O. R. R. Co. are used by said carriers "as instrumentalities or facilities in the conduct of interstate and foreign grain transportation" and are the only grain elevators at the present time in or near said city of Baltimore owned or controlled or "used" by them; that the members of the Chamber of Commerce and grain dealers generally are dependent upon the said roads and elevators for the delivery, storage and handling, upon arrival in the city, of all grain purchased or consigned to them either for export or domestic consumption; that said carriers have a monopoly of grain elevator facilities in the said city; and that, acting in concert, they have assumed to establish so-called charges, or exactions, to be imposed on all grain handled by them,—the complaint then proceeds substantially as follows:

That as appears from the said tariff and supplement to tariff the said railroad companies, on and after November 16, 1908, will deduct from each and every car of grain transported to and delivered into said elevators certain proportions thereof, as in said tariff and supplement to tariff fully set out, and will not deliver the whole, or an equivalent amount, of the grain so delivered

to and received at and elevated into said elevators, but will deliver to the owners, or upon their order, a less amount of the said grain, to the extent of the deductions aforesaid.

At the same time the said defendants announce that they will exact and demand freight and elevating and storage charges upon the full and actual weight of grain carried to and delivered into said elevators, notwithstanding the deductions therefrom so to be made, as aforesaid, upon delivery out of the elevator.

That the so-called "scaleage deductions," aforesaid, will, if persisted in and allowed to be made, constitute an arbitrary, unjustifiable and illegal appropriation of the property and moneys of the complainant's members and others as aforesaid, and are not, in any true sense, a rate or charge either for transportation, elevation, storage, or handling, within the meaning of the Acts of Congress to regulate commerce.

That the said defendant railroad companies now exact and receive ample (if not excessive) compensation for the carriage of grain from points along their respective lines to the city and port of Baltimore, in accordance with tariffs and schedules heretofore filed and published with this Commission and now in force, and the said defendants likewise exact and receive ample (if not excessive) compensation for all services incident to the receipt, delivery, elevation, handling and storage of grain in and near Baltimore, as aforesaid; and this complainant, therefore, charges and avers that any increase, direct or indirect, by any means or device, in said charges for carriage, or in said elevator charges, over and above existing rates and charges, would be wholly unjust and unreasonable, and would amount to and constitute an unjust discrimination on the part of the defendants against the city and port of Baltimore, and its citizens, and others as aforesaid, engaged in the grain trade, and would make or give an undue and unreasonable prejudice and disadvantage against the grain trade of the city and port of Baltimore and an undue preference and advantage in favor of the grain trade in other cities and ports.

That if the said so-called "scaleage deductions" can be properly regarded as a rate or charge in connection with the carriage of grain to the city or port of Baltimore, or in connection with its elevation, or storage upon arrival thereat, then this complainant charges and avers that the same is unreasonable and unjust, and is an unjust discrimination against Baltimore as aforesaid. If, however (as this complainant submits), the said so-called "scaleage deductions" are not rates, charges or extractions, within the meaning of the Acts of Congress to regulate commerce, then the proposed deductions aforesaid (if allowed) will be a regulation or practice affecting rates, and said regulation or practice will be unjust, unreasonable, unjustly discriminatory and unduly prejudicial to the grain trade of the city and port of Baltimore and to the shippers of grain to said city and port, and will be unduly preferential to the grain trade of competing localities and will amount to and constitute an appropriation, or confiscation, of the property of the complainant's members, and others as aforesaid, without color of law.

Wherefore the complainant prays that the defendants above named may be severally required to answer the charges herein, and that after due hearing and investigation an order may be made declaring said so-called "scaleage deductions" (whether the same be rates and charges or regulations or practices affecting the same) unreasonable and unjust; unjustly discriminatory, unduly prejudicial to the grain trade of the city and port of Baltimore and unduly preferential to the grain trade of competing localities, and commanding said defendants and each of them to cease and desist from thereafter exacting, demanding, charging or receiving said so-called "scaleage deductions," or from thereafter continuing to enforce said regulations and practices in respect to said so-called "scaleage deductions."

The defendant carriers were thereupon directed to answer within ten days; and the tariff complained of will therefore be "held up" pending a ruling on the complaint.

The United States is entering a further period of liberal growth that will sustain the values of corn lands. Corn yields in the Middle West can only be increased by scientific fertilization. This means higher cost of production. As natural fertilization is to be desired, the production of live stock on a large scale is a necessity. The increased value of land and corn raising cost will force a gradual higher plane of live stock values.—E. W. Wagner, Chicago.

UNIFORM GRADES.

The campaign for uniform grading of grain so auspiciously begun at St. Louis was but begun there, and is still far from a working factor in the grain trade. Before it can be that, the rules adopted at St. Louis, with or without modification, must be adopted by the grain exchanges and official boards of inspection of the country. As the influence of the local exchanges is usually sufficient to modify the action of state inspection boards the first task of the promotion committee will be to enlist their good offices. The immediate question then is, what do the exchanges think about the principle of uniformity itself and the rules agreed to at St. Louis?

In order to learn this in the most general way, the "American Elevator and Grain Trade" addressed a letter to one or more members of each grain exchange east of the Rocky Mountains, asking, not for an official statement, but for a personal understanding of the way the members talk or feel on the subject. To this request a number of gentlemen have kindly replied, others ignored the request, some declined because they "could not anticipate" action of the body with which they happened to be connected—something that was not asked for. As the opinions sent to us are entirely personal, it would obviously be improper to print the names of the writers; but the editor in each case guarantees the genuineness of the letter and the entire competency of the writer to state fairly public opinion on the exchange he belongs to. Regretting that we have not been favored with an opinion from each exchange in the list, we give the following as representative:

Baltimore.—The grain trade of Baltimore has always regarded uniformity of grades and its application as an ideal condition most earnestly to be desired; nevertheless it has observed with deepest concern the numerous, and sometimes impracticable, propositions which have been suggested and even received with some favor when uniform grading was under public discussion. The trade contends that no radical change should be made in existing conditions until the full effect of the proposed change is determined and understood. The world's grain business is so evenly balanced that an attempt at an impracticable readjustment must result in disarrangement of those methods which have in the past satisfactorily served all interests. The chief object of the grain trade generally is the successful marketing of American grain at the highest possible price obtainable; and it can be seen that hasty or unwise action will redound more to the injury of the producer than any others.

Baltimore's grain grades were established years ago, and have practically remained as first established. The grades were fixed after careful thought and much experience, and were not arranged in the interests of the local grain dealers, but for the purpose of handling grain produced in nearby sections, also in those parts of the Middle West which are regarded as naturally tributary to this port; therefore, before Baltimore can make any important changes in its long-established methods it must first consult the dealers in those sections of which it has for so long been and still remains the natural outlet, because those sections will not willingly consent to a sacrifice of their interests, even if it might be so desired.

So far as is concerned the clamor of the foreign grain buyer for some new advantage, it refers to all America; but the charges of improper grading and misrepresentation, which have been so often stated and exaggerated with repetition, do not apply to Baltimore, but refer to cargoes of grain shipped from other ports. Baltimore grain dealers desire uniformity and hope to obtain it; but in order to do so they must not unjustly oppose the interests of a large producing territory, neither should they assist in putting shackles upon the export trade; and when it is taken into consideration that at present the

foreign buyer is satisfied with Baltimore's methods, also that the interests of the Middle West are being properly cared for, any change must be considered with the single idea of protecting those important interests and not upon the behest of entirely well-meaning persons, who probably do not fully appreciate the vast importance of what they may regard as exceedingly trifling matters.

With this clearly in mind, the grain trade of Baltimore gladly welcomes any effort for uniformity in commercial usage, but desires that inconsiderate action shall not adversely affect important general interests.

Cincinnati.—Replying to your favor regarding our market adopting the uniform grading, will say that our Chamber of Commerce sent a committee at two different times, and, as I understand it, they have been in accord with the adoption of this grading. Our members here, from what I can understand, are in favor of it.

Cincinnati.—I have interviewed quite a number of men prominent in the grain trade on our exchange, and reach the conclusion that there is very little, if any, of positive objection among our members relative to the adoption of the proposed uniform grades for grain as agreed upon at the St. Louis Convention. The question is now taking shape with a view to reaching definite conclusions by our association within a short time.

Cleveland.—No action has been taken on this point by our grain and hay committee. I believe, however, that the grain dealers, members of the Chamber of Commerce, are in a receptive attitude on the question of uniform grading, and would be inclined to consider it most favorably at the moment when any considerable number of the larger exchanges should decide to adopt the grading of the National Association. Cleveland is not important enough as a grain market to be able to take independent action in this matter, but must govern itself largely by the custom of the principal markets.

Indianapolis.—There was a meeting a few days since of our grain committee, and the question of adopting the grades as recommended at St. Louis was discussed; and it is my opinion that all the members of the committee are unanimously in favor of uniform grades. No action was taken at this meeting, however, the committee preferring to wait until each member of the committee had been supplied with a copy of these grades in order that they might vote intelligently upon the subject. The committee was perfectly willing to adopt the grades on wheat, but thought that, in addition, we should have another grade of "Extra 3 Wheat," in order that a car of wheat, simply being below the line for No. 2, would not necessarily be discounted the full difference on the lower grades of No. 3. Our millers and all of our dealers looked upon this proposition as favorable.

Each member of our grain committee has now been supplied with copies of the rules as recommended in St. Louis, and in the near future it is the intention to call a meeting of the committee, together with all of the grain trade interested here, with a view to taking action on adopting these grades. We are rather of the opinion that No. 3 corn should not permit of 19 per cent moisture, as quite often Eastern buyers of our grain find corn containing so much moisture arriving at destination in a heating condition, which, personally, I do not consider fair to the buyer.

I think our trade as a rule very strongly favors uniform grading, and sincerely trust that we can all get together and adopt rules that will be applicable in all markets.

Louisville.—You probably know the position that the Louisville trade took during the discussion of this subject at the late meeting in St. Louis. In explanation, I want to say to you that Louisville is not opposed to "Uniform Grading." On the contrary, we are firm believers in that principle; but we felt that there probably was a tendency exhibited in the St. Louis meeting to lower stand-

ards to a point where the buyers were not being given fair consideration.

Since that meeting, I have had some correspondence with friends who did not thoroughly agree with our point of view; and we have come to the conclusion that the intelligent way to discuss this subject would be to have another meeting and have presented at that meeting actual samples of grain, showing the percentage of moisture, the percentage of dirt or impurities or mixtures of other grains—in fact, type samples of all proposed grades; and all parties concerned would be able to form a more intelligent opinion when they had such actual samples before them than if they attempted to reach their conclusions by a consideration of a simple description of the proposed grades.

Under these circumstances, I should be inclined to think that it would probably be better to delay any discussion of the question until such time as a meeting could be called and the Inspectors' Association prepare and offer to that meeting samples to represent the grades under consideration.

I should say that at this time Louisville favors uniform grading, but wishes, when the "uniform grades" are established, that the interests of the buyer and consumer should be as fully considered as those of the country shipper, or the handlers of grain at elevators located at terminal markets.

Memphis.—After canvassing the trade here in regard to uniform grading of grain and the grades as adopted by the Grain Dealers' National Association, at St. Louis in October last, I find the general opinion to be as follows: This market is not opposed to uniform grading (except on corn), provided it is done upon an equitable basis. The objections to the corn rules are based upon the excessive percentage of moisture allowed, and the amount of cob, rotten corn and dirt which under the rules are permitted in No. 2 and No. 3 corn. We do not think the moisture test should exceed over 14 per cent for No. 2, 16 per cent for No. 3, and 20 per cent for No. 4 corn. We would like to have the attention of the people who composed these rules called to the fact that corn that will carry cool and sweet in the West and North for a reasonable length of time would deteriorate rapidly in this climate, and for this reason it would be impossible for the trade here and in other Southern markets to subscribe to the uniform grading of corn. Neither do we feel inclined to pay for the amount of rotten corn and dirt (from four to eight thousand pounds in the average car) which is permissible in the grades adopted by the National Association.

The latter objection would also apply to the grades adopted on oats. For instance: The grade of No. 3 oats of all varieties as adopted would be seriously objectionable.

This market has been opposed to Government inspection, but such rules as were adopted by the National Association for the grading of corn and oats, if enforced, will do more to make converts to Government inspection than all the arguments made against it.

Minneapolis.—So far as the writer is able to judge, the members of the Chamber of Commerce seem to be quite friendly to the uniform grades, as adopted at St. Louis. Of course, the grading of grain is in the hands of the state, and the Chamber of Commerce has no control over the same. Official copies of the "Grades," as adopted, have been circulated among the members, and so far I have not heard any criticisms whatever.

Nashville.—The sentiment here relative to uniform grading is very favorable indeed. There is general objection to Federal inspection, but almost unanimous sentiment favoring uniform grades for all over the country; and, in the case of corn, grades to be based upon a moisture percentage, as well as general condition. The suggestions of uniform grading, as adopted by the meeting of the National Grain Dealers' Association at St. Louis, seem to give entire satisfaction, except that some

are claiming the per cent of moisture allowed should have been smaller.

Omaha.—While nothing official has been done by either the grain committee or the directors of the Omaha Grain Exchange, I have quietly made inquiry among the members and do not find any sentiment in favor of adopting these rules. If the various inspection bureaus of the country generally adopt these rules our Exchange will have to follow, but it is the judgment of most of the members that it would be almost impossible to attempt to grade corn by the moisture percentage. Therefore, I would not be in favor of it myself, and do not think our members generally will favor the adoption of the rules as passed at St. Louis.

Peoria.—In regard to the uniform inspection, I would say that I feel I can say with confidence that every member of the Peoria Board of Trade is strongly in favor of uniform inspection. Our directors took action on this matter when it first came up two years since, and the original motion of adoption of uniform inspection was made at the instance of our Board at the Chicago meeting of the Grain Dealers' National Association.

As to the adoption of the grades established in St. Louis, I would say that the grades as adopted there seem to meet with uniform approval. In my conversations with the various grain men here, I have not found anyone who objected to the grades in any way. It is true that all of our members have not read the rules as thoroughly as they might have, but I feel confident that they will meet with general favor. As far as the adoption of these rules by our Board is concerned, I do not hesitate to state that in my opinion they will be adopted as soon as practical. The wording of the grades is very similar to our own, and within the next few months, unless I am greatly mistaken, our Board will adopt the phraseology of the St. Louis agreement.

St. Louis.—The grain interests of the St. Louis Merchants' Exchange feel a deep concern for the establishment of uniform grades and grading of grain in all the markets. While here and there one is found who does not indorse the plan, it is usually because of an idea that uniform grades and grading are impracticable. But it is safe to say that the majority of the members of the Exchange directly affiliated with the grain business emphatically favor a trial, as they have become sick and tired of complaints of country shippers that the same character of grain grades higher in one market than in another. They realize, too, that to make a success of the scheme it will be necessary for the inspectors of the different markets to get together and formulate some plan and understanding that will enable all of them to interpret the same rules of inspection alike. Otherwise, uniform grain grades will be of no effect.

Toledo.—[The Toledo Produce Exchange on November 5 adopted the St. Louis Convention's "Uniform Grades" and will put them into effect on July 1, 1909.] At a meeting of the directors yesterday the question was taken up, and there was another meeting held to-day (November 5) of the inspection committee, with the above result. Toledo, therefore, starts the ball rolling, and I do hope other markets will fall in line. You know my views on this question, and I am heartily in favor of uniform grades, especially those as gotten up by the Chief Grain Inspectors, and which were adopted at the last meeting of the Grain Dealers' National Association. As far as I can see, members here are unanimous in the belief that uniform grades should prevail, and that those we have adopted are about as near correct as can be.

Secy. J. W. McCord of Columbus writes: "I am just now sending out to our members the pamphlet giving the grades as agreed upon by the National Association at St. Louis; but, from what I know of the feeling of our members in a general way, on the whole proposition, as it existed prior to the changes made at the national meeting, I am of the opinion that the members of the Ohio Association, by a very large majority, favor the plan now before us. It would seem that the tendency is toward favoring the producer and the country elevator man. I am quite sure that there will be very little, if any, opposition on part of the country grain dealer.

PRESS OPINION.

Operative Miller.—The recent annual meeting of the National Association of Grain Dealers marks an epoch in the history of the grain trade of our country, and has been the means of making it easy to accomplish a vast change for the better in the work of the average mill manager and superintendent. The adoption of uniform rules for inspection and grading of grain will lead to a more careful selection of the men who are responsible for fixing the grades and cannot otherwise than eliminate careless inspection, which will be bound to be called in question by the next board of inspection which will be called on to pass judgment on its merits. The day has now passed when an unfair grading must be endured simply because of an arbitrary ruling by an incompetent inspector working under ambiguous rules. The time has also passed when the slick tricksters of the trade can juggle the grades between towns, to the eternal cost of the consumer.

Commercial West.—There is no other question of common interest before the grain trade of such great importance as that of having a uniform system of grading grain adopted in all the markets of the country. The necessity has existed since the beginning of the markets, and there has long been an insistent demand for something different, from farmer, shipper, many eastern buyers and perhaps from all European importers of American grain. But never before has the grain trade actually been forced to act—do something radical or stand aside and submit to the remodeling of the grain inspection systems by others. If the members of the grain trade in the various markets can have adopted a system of inspection insuring a uniformity of grades—one that gives satisfaction—there will be no occasion for Federal inspection.

Now there is, in most good Americans, an innate feeling—a mild rebellious disposition—against what might be termed Federal interference, control or supervision. Every tendency in that direction, every seeming Federal interference or "meddling," arouses resentment. . . . To return to Federal inspection of grain, it may be said that results might be highly satisfactory, and the Commercial West believes they would. The question, however, is rather, Cannot a satisfactory system be adopted without the intermeddling of the Federal government? Until the adoption, by the Grain Dealers' National Association, of uniform grades of grain for all the markets of the country, the editor of the Commercial West strongly favored Government inspection, because of the inadequacy of the systems in force and the apparent injustice to millers and European importers. If satisfaction can be attained through the united efforts of members of the grain markets, it would be poor policy to attempt, in the next Congress, to pass a Federal inspection grain bill. Let us give the Grain Dealers' National Association a chance to make good. There is time enough, if it fails, to call upon Congress.

Modern Miller.—From the above it would appear that, after a period of two years, uniform standards are about as far from general use as they were before the agitation. Yet there is no denying that there has been a tendency toward eliminating the conflicting features of inspection in the various markets, and also to reduce the conflict between various markets as to grades. Yet each market sticks to certain features of grading, which features are not agreeable elsewhere. It seems that uniform grades have the same sectional differences to combat that the Millers' Federation has experienced in uniform package differentials. The Federation has not only had to fix differentials for Eastern and Southern territory, etc., but has also had to combat a never-ending tendency on the part of the mills to occasionally evade the agreed differentials. The uniform grade agitation has been productive of good, but it is our opinion that uniform grades will never be made effective by mutual consent.

Flour and Feed.—There has been much opposition to uniform grading from the various trade centers, principally for the reason that each locality feared that it would be an injustice to its traders, unless its particular rules would form a part of the uniform system. Men of broad experience in this line hold that this position is untenable, and maintain that uniform grading rules is the only thing that will make it possible for this country to develop a large grain trade in foreign markets. The question is one of good business policy, and the boards of trade of the country should look upon it in this light. There is a strong demand for uniform grading by foreign buyers, and if we do not accede to their wishes we cannot expect to have a strong hold on their business. Considering all phases of the question of uniform grading, there is little to be lost by its adoption and much to be gained, and it is to be hoped that the recommendation of the St. Louis meeting will soon be generally in use.

OLD AND NEW SYSTEMS OF INSPECTION COMPARED.

The Illinois State Grain Inspection Department has issued its first statement since the installing of the new system of office inspection of grain in the Department. Heretofore all grain has been inspected at the tracks, but on September 17 last a new system was installed whereby the samples were taken from the cars by the Department samplers to the Chief Inspector's office, where a more careful inspection could be made under his direct supervision. As yet the change has been made on but three roads, the C., M. & St. P., the C., B. & Q. and the Alton; but during the coming weeks it is intended to extend the system to cover all the roads entering Chicago.

The total number of cars inspected by the Department from September 17 to October 29, inclusive, was 21,102, of which 13,359 cars were

Illinois state Grain Inspection Department was made clear recently,' said a leading receiver. 'A car of new corn arrived over the Chicago & Alton railroad, graded No. 4 white; on a prompt test by the Board of Trade sampling department for moisture it was found to contain 17.4 per cent (maximum generally accepted for No. 3 is 19 per cent); whereupon a request for reinspection was made and the grade changed to No. 3 white. On this corrected and proper inspection the property was sold the same day, a short session at that—Saturday. The time consumed for test and reinspection was less than one hour. Another carload arriving over the Santa Fé road (a road not yet under the improved system), showing practically the same moisture and test, 17.7 per cent, was graded No. 4 yellow, but the fact that reinspection could be accomplished only after delivery to a special track, under the rules of the Department, which might involve a delay

Average much dryer now than on November 15, last year."—Pope & Eckhardt Co.

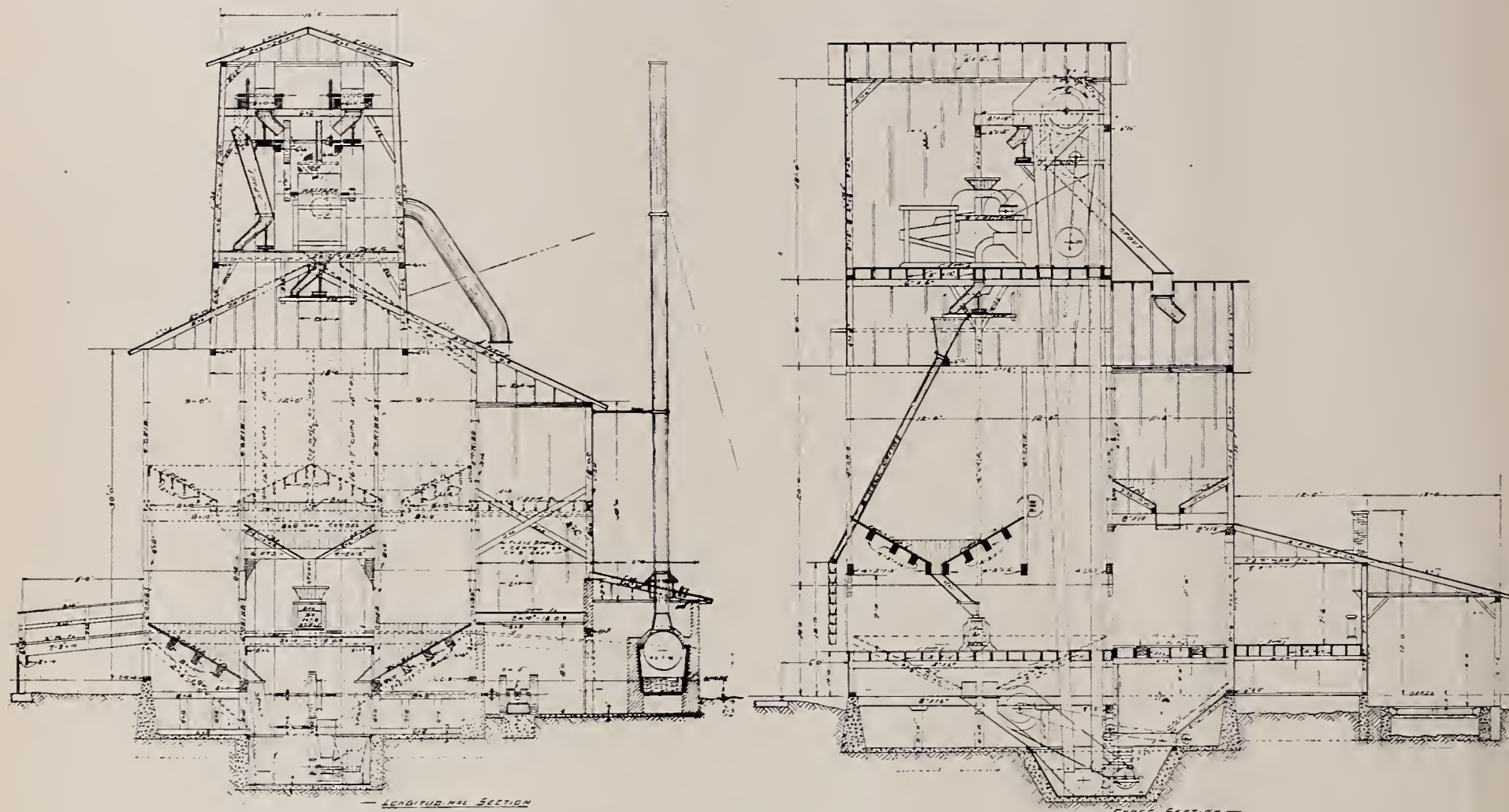
PLANS FOR NEW INDIANA ELEVATOR.

The accompanying illustration shows the plans for the new elevator of David Unger & Son, at Russiaville, Ind., which is to take the place of the elevator burned recently. The elevator is a modern shelling and cleaning house, with a capacity of 25,000 bushels.

It is of cribbed construction, covered with Sykes Roofing and Siding and is equipped with two elevator legs, Western Sheller and Cleaner, B. S. Constant Chain Feeders, Fairbanks Four-Ton Dump Scale and one Fairbanks Automatic Grain Scale.

Power will be furnished by an Atlas Steam Engine.

The plans were made by the Burrell Engineering and Construction Company, who are building



PLANS FOR DAVID UNGER & SON'S NEW ELEVATOR AT RUSSIIVILLE, IND.

under the old system and 7,743 under the new; and the following tabulation will show the percentage of appeals and changes:

	Old System.	New System.
Total number of cars inspected.....	13,359	7,743
Number of reinspections called.....	75	17
Reinspections—sustained	21	13
Reinspections—changed	54	4
Reinspections—appealed	8	2
Inspections sustained on appeal....	0	2
Inspections changed on appeal.....	8	0

The table shows that under the new system there has been but one-half as many calls for reinspection, and that while under the old system the grades changed on application averaged one in every 247 cars inspected, under the new system the Department has had occasion to change an average of but one car in every 1,935. The new system is thus shown to be much more satisfactory and the inspection by a corps of inspectors, working together under favorable conditions, is more uniform and correct than that attending the many unfavorable conditions of the old system.

The following incident relating to the new system of inspection was given in a recent issue of the Chicago Tribune under the caption or "Trade Gossip on Change":

"A practical demonstration of the benefits derived under the new system adopted by the

of from twenty-four hours to several days, the consignees, fearing unfavorable changes in the market and weather conditions, decided it was best to sell the corn on the market as No. 4 yellow, losing a benefit in price which would have been available on the better grade. The state Department should be helped and encouraged in every possible way by everyone in the trade, in the further promotion of this system. The country trade have emphatically indorsed it."

NEW CORN.

The feature to-day (October 29) was the advance of 2 cents per bushel in certain grades of new corn, forced by the fact that the stocks of old corn are everywhere insignificant and the small arrivals of new so far inadequate to meet the necessary consumptive demand. The receipts should increase soon. However, one of the largest dealers in central Illinois writes us as follows: "Farmers not disposed to sell new corn at our stations, though we are bidding 55 for November, December or January delivery. So far we have not taken in a bushel of new corn and have contracted for less than 75,000 bushels, while last year by November 1 we had contracted for nearly 600,000 bushels at 40 to 45 cents. Will have three-fourths of normal crop; quality decidedly superior to that of last year.

the elevator, and it is expected to be completed by December 1.

NEW ELEVATOR AT FORT WILLIAM, ONTARIO.

James Stewart & Co. have been awarded the contract for the big 4,000,000-bushel elevator which the Grand Trunk Pacific will erect at Fort William, Ont. The specifications call for an absolutely fireproof house, fully equipped for cleaning and drying grain and capable of taking in more bushels of grain per hour from cars and turning out more per hour to vessels than any other yet designed. Work will be started immediately and the house will be ready to receive grain by November 1, 1909. Chas. M. Hays, president of the Grand Trunk Pacific Railway, in a recent interview spoke in part as follows: "This house will be only the first unit of our elevator plant at Fort William, which, when fully developed, will have a storage capacity of 40,000,000 bushels. We will shortly follow up the work of laying tracks, building our engine house and shops, coal handling plant, wharves, freight sheds, etc., and hope to be utilizing the Mission terminal for the 1909 crop."

New Orleans in October exported 776,500 bushels of wheat and 135,487:38 bushels of corn.

[From Bulletin 65, Bureau of Statistics.]

RUSSIAN EXPORT TRADE CONDITION.

BY I. M. RUBINOW.

In the export trade in wheat, as well as in all other Russian grain, the commission business has become prominent. But here the foreign commission merchant usually represents the stronger party to the transaction, as the exporting firm is more powerful than the local dealer in the domestic trade, and, according to the statements of Russian grain dealers, the latter are considerably at a disadvantage in the trade.

Perhaps one of the main reasons for this state of affairs is to be found in the conditions of the Russian domestic grain trade. Russian grain not being standardized, the foreign buyer refuses to accept it before he has an opportunity of examining it. Trading is, therefore, done mostly by sample. Samples of the year's crop are sent soon after harvest to certain European markets and some standard of "fair average quality" is established for each commercial year.

After these standards are established, the actual trading is done either according to "fair average quality" (so-called trading f. a. q., the standard being either the season's crop or the season's shipments "at time and place of shipment") or by sample.

But the deterioration in quality and condition of the wheat shipped, as well as the unreliability of some Russian exporters, of which more will be said in a later section, has gradually changed the f. a. q. form of trading to one of dealing according to individual samples.

All trading in Russian grain is done c. i. f. instead of f. o. b. The difference is much more than a formal one. The actual cost of insurance and freight may be presumed to be discounted in the prices, but there remain important differences as to conditions of delivery, which are carefully specified in the sale contract.

Trade Contracts.—In the conditions of trade contracts the Russian grain seller is sometimes said to be in a less favorable position than his American competitor, the difference being usually explained by the condition of the Russian grain exported, as has been described in the preceding section.

The standard forms of grain contracts used by practically all English grain importers are those of the London Corn Trade Association. These forms are also used by the grain buyers of eastern Germany, Denmark, Sweden and Norway. Belgium has its own standard contract shaped by the Antwerp "Chambre Arbitrale et de Conciliation pour Grains," while in other Latin countries individual contracts are still largely used.

The quantity of the consignment and the port of shipment are specified in the contracts, but the port of delivery may, within stated limits, be left to the option of the buyer, and may be changed after clearing. The contracts of the London Corn Trade Association and of the Antwerp Chambre allow shipments from 2 to 5 per cent above or below the contract quantity and a further variation in quantity up to 8 per cent is permissible, provided that "any excess or deficiency over the above 2 to 5 per cent shall be settled at the c. i. and f. price in the bill of lading and on the quantity thereof, value to be fixed by arbitration, unless mutually agreed. Other contract forms than those of the two organizations mentioned above usually provide for a straight 5 per cent limit of variation in quantity, the buyer having a right to refuse to accept any other portion of the consignment than that contracted for when the difference is greater than 5 per cent.

The differences in the various trade contracts mentioned above are specially noticeable in the provisions referring to the quality of the grain. The three different ways of buying wheat may be described in the terms of the Corn Trade Association contract, as follows: (1) Of fair average quality of the season's shipment at time

and place of shipment (the so-called f. a. q. transaction); (2) at time and place of shipment about as per sealed sample; and (3) official certificate of inspection to be final as to quality. This last condition, referring to inspection in the country of export, is the usual mode of purchasing grain from the United States, but is altogether absent from the Russian grain contracts, for many reasons, explained in the preceding section of this report. In the f. a. q. transactions complaints are frequently heard from Russian exporters that "a fair average quality of the season's shipment at time and place of shipment" is established by the Corn Trade Association in London without consultation with the Russian seller. All efforts of organizations of exporters in Russian ports to establish their own f. a. q. standards are said to have failed, because of refusal of British and other European importers to accept them. In any case it is significant that in Russian dealings with British and north European buyers, f. a. q. transactions have been decreasing in frequency because of the vast differences frequently noticed between the f. a. q. standard and the quality of individual shipments. The usual form of transaction during recent years has been that known as "per sealed sample."

Another very important difference between the American and Russian grain contracts of the London Corn Trade Association is the provision for the guaranty of the natural weight. This provision is found in the Russian and also in the South American or so-called La Plata grain contract, but is absent in the American, excepting as implied in inspection certificates, and also in the Australian grain contract. This guaranty is also found in the transaction between Russian and most other European ports. In Russian shipments to northern European ports, natural weight is guaranteed at time and place agreed upon and the buyer assumes the risk of loss up to 1 per cent. The southern and European ports do not make this allowance.

Indemnification for loss of natural weight or for difference between the actual and guaranteed natural weight is regulated according to definite scales. In the trade with Russia the weight agreed is usually expressed in poods and funts per chetvert, or in kilograms per hectoliter, but according to the London scale 1 per cent is deducted from the price for the first 3 funts per chetvert; that is, one-third of 1 per cent for each funt (1 funt per chetvert = 0.15 pound, or 2.42 ounces, per Winchester bushel). In Rotterdam and Antwerp the scale is 1 per cent of the price for the first kilogram per hectoliter (12.43 ounces per Winchester bushel) up to underweight of 2½ kilos, and 2 per cent for each additional kilo up to 5 kilos per hectoliter, beyond which the difference in net weight is sufficient cause for arbitration. The reduction is larger in southern ports and a limit is established beyond which insufficiency in natural weight per bushel is sufficient cause for refusing a shipment.

Arbitration.—The usual method of settling all disagreements between buyers and sellers under the rules of the London Corn Trade Association is by arbitration. Delivery being effected only at the time of arrival at the foreign port, determination of quality is made at the time of delivery and not at the time of shipment. At the time and place of delivery both buyer and seller are represented by agents, who take samples from the cargo for use in possible future arbitration. In case of disagreement, both sides may agree upon friendly arbitration, each electing an arbiter and the two electing a third. But in case of failure to agree, the questions in dispute are referred, according to the contract, to two arbitrators to be appointed officially by the executive committee of the London Corn Trade Association at a meeting convened by notice, and at which not less than three members shall be present, such two arbitrators having power to appoint a third. The arbitrators appointed are in all cases

principals engaged in the corn trade as merchants, millers, factors or brokers, and are also required to be members of the London Corn Exchange, the Baltic, or the London Corn Trade Association, and to reside in the United Kingdom.

Every award is required to be in writing on an official form to be supplied by the Association at a charge fixed by them, and the award of any two arbitrators (subject, however, to the right of appeal) is conclusive and binding upon all disputing parties, both with respect to the matter in dispute and all expenses of and incidental to the reference and award.

In case either party shall be dissatisfied with the award, a right of appeal lies, under certain conditions, to the committee of appeal elected for that purpose. The committee of appeal is required to confirm the award appealed from, and the appeal fees follow the award, unless four members of the committee decide otherwise.

The former conditions of arbitration are the same for all transactions of the London Corn Trade Association, but in actual practice arbitration has played a more important rôle in the transactions with Russia than in those with the United States.

Among other differences between the Russian (or so-called Black Sea and Danubian) and the American contracts may be mentioned the following: That some of the Russian contracts include the s. d. clause, meaning "sea damaged, for seller's account." Another clause frequently found is the so-called r. t. (rye terms) clause, which does not permit appeal from the original decision of the arbitrators.

PORTLAND MERCHANTS' EXCHANGE.

The Merchants' Exchange of Portland, Ore., has just entered on the thirtieth year of its existence; and is confronted with a large increase of business over the immediate past, especially in the marine department, to accommodate which the Exchange has been removed to a new building at Fourth and Oak streets.

The immediate cause of this change of location, the Oregonian says, was the demand of the grain trade for facilities for handling a sample market. For this cash grain trade, tables for samples will be provided, and an opportunity afforded buyers and sellers to meet and inspect offerings and make trades.

The San Francisco grain business has reached such proportions that a large number of coasting vessels are in the trade almost constantly, and by combining the shipping and buying features of the business in one exchange so that shippers, ship agents and owners can have a suitable meeting place each day, the business of all parties will be facilitated. The Exchange will continue to supply the grain trade in the city and country with market quotations and statistics regarding the grain trade of the world.

The Merchants' Exchange, which is now covering a wider field than ever before, was established in November, 1879, W. S. Ladd, John McCracken, William Wadhams, D. J. Malarkey, D. P. Thompson, M. S. Burrell, D. F. Lehigh, James Steel, P. Wasserman and Charles Sweeny appearing as incorporators. The latter, who is now best known as a millionaire miner of Spokane, was the first secretary and manager of the Exchange, and J. McCracken, who was then a prominent grain shipper, was the first president. A year later, D. F. Lehigh became president and W. J. Lehigh secretary. The Exchange was managed by the Lehighs until 1897. Since that time it has been under the management of E. W. Wright, and for the past eight years, Fred J. Clark has been secretary. The Exchange's list of members includes ten who have remained with it since December, 1879, and a dozen others who have been members for from fifteen to twenty years, with some of the country members on the list for the past fifteen years.

[For the "American Elevator and Grain Trade."]
BUYER. LIABLE FOR CORN HEATED IN TRANSIT.

BY J. L. ROSENBERGER,
 Member of the Cook County Bar.

Where a merchant directed another to have shipped to him corn of a certain kind and grade, at a certain price, over a certain railroad, the weight and grade of the corn to be evidenced by a certain official certificate, the Court of Errors and Appeals of New Jersey holds (*Champlin vs. Church*, 70 Atlantic Reporter, 138) that the fact that the corn while in transit became heated would not excuse the buyer from the payment of the purchase price.

The facts in this case were that the defendant delivered to the plaintiff, a grain merchant in the city of Newark, N. J., the following order:

"Please have shipped to me at South River, via N. J. Central Railroad, one car, three mixed corn, price 57. Shipment: Hurry. Terms: Arrival draft. Remarks: Western Official Certificate of weight and grade final."

The plaintiff ordered the required corn from a concern at Toledo, Ohio, and it was delivered at South River, where the defendant refused to accept it, upon the ground that it was damaged by heating. The plaintiff, having waited a reasonable time for the defendant to accept the corn, finally sold it, after notice to the defendant, and brought this action to recover the difference between the price realized upon the sale and the agreed price of the corn. The plaintiff recovered judgment, which is here affirmed.

The conspicuous feature of this case, which differentiated it from the ordinary case in the category of vendor and vendee, the court says, consisted in the fact that the vendor in this case was so limited and circumscribed in the exercise of judgment by the language of the written order from which he derived his authority to purchase: that he was in essence a mere conduit, or special agency, through which the goods were to be delivered. Upon the execution of the order and substantial compliance with its requirements his duty was performed, and his right to the agreed compensation was complete.

It will be observed, the court goes on to say, that the vendor was not to ship but to "have shipped" to the defendant, at a fixed price, corn of a certain quality, over a certain railroad, the grade or condition of the corn to be evidenced, not by his judgment, but by a certain form of certificate which, as between him and the defendant, was to be final. "Both in morals and in law," remarks a recent writer of distinction, "one is responsible for the thing which he brings to pass, whether he employs an inanimate object to effectuate his purpose or sets in operation the infinitely more complicated chain of causation which results from the employment of another moral agent." ("Legal Liability," by Street, Chap. 41.)

The trial court found as a fact that the corn when shipped was in good condition, and therefore the delivery to the carrier in accordance with the specific instructions contained in this order relieved the shipper of liability for damages in transit and imposed the burden and risk of damage upon the consignee. In the light of this status, it became a matter of slight importance, if any, whether the testimony of a conceded dealer in grain, not for the purpose of contradicting the terms of the order, but for the purpose of eliciting the meaning of a trade expression employed therein, was relevant, although under the undeviating rule and policy of the courts in such matters it was properly admitted.

The handsomely appointed offices of the Standard Stock and Grain Co. in Jersey City were raided by Jersey City police and twenty-seven persons found in the rooms were arrested. All the prisoners described themselves as employees of the company. The manager of the concern

was not in the place and escaped arrest. The raid was made upon complaint of Charles S. Little, a broker of East Billerica, Mass., who alleges that \$3,000 is due him from the company, and that he has made repeated and unsuccessful efforts to obtain a settlement. The charge made against the concern is that it maintained a disorderly house.

NEW HESS DRIER AT WEEHAWKEN, N. J.

The Hess Warming and Ventilating Co. of Chicago has just finished the installation of a mammoth Hess Drier for export trade at the West Shore Elevator, Weehawken, N. J. This drier, with the two at Baltimore and one at Philadelphia, brings up to four the number of



"HORRIBLE EXAMPLES," FIG. 1.

3-unit Hess Driers now in use along the Atlantic seaboard. Two other Hess Driers of the same size are also in operation at New Orleans and Chicago.

The installation of this newest drier was completed in three weeks, thereby establishing a new record for such work. Heretofore five weeks has been considered good time for an installation of this magnitude. A force of sixty men were employed upon the work. The contract for the drier calls for \$23,000. The entire cost to the owners, the New York Central & Hudson River Railroad, will be about \$40,000 when the additional cost of boilers, building, conveyors and the like is reckoned in the total.

The building in which the drier is housed has a frontage of forty feet and is forty-six feet in height. In constructing the drier one hundred and thirty-five tons of metal in some thirty thousand different pieces were used. Some five miles of steam pipe is included in the plant. The drier has six 8-foot blowers, delivering 150,000 cubic feet of air through the drying racks every sixty seconds. In operation the new drier will hold 6,000 bushels, and will be capable of turning out 50,000 bushels of Hess Dried Corn, or other grain, each day.

With its vast capacity this new Hess Drier should prove a valuable addition to New York's grain export trade.

It is estimated at Beaumont on reliable data that there are now 175,000 sacks of rice in the warehouses in this county belonging to the farmers and ready for sale and shipment when the millers are ready and willing to pay the price asked by the producers for the cereal.

"HORRIBLE EXAMPLES."

The accompanying engravings, from photographs taken from the records of the Chicago Board of Trade weighmaster's office, are not printed here simply because they are excellent specimens of the photographer's art, but because they are typical illustrations of leaky cars on arrival at Chicago, and are intended to show the shipper how he himself or his men will let "good enough" answer for "just right" when starting grain to this terminal. Not that all these causes of loss were remediable at the point of shipment, perhaps, but because they show how necessary it is to take every precaution at the loading elevator to insure the integrity of a suspicious car in transit.

Figure No. 1 shows how leakage at a defective corner post and end sheathings can be prevented. This car arrived leaking grain and the leakage is being stopped by the repairs indicated.

Figure No. 2 shows some sheathings badly bulged out. This may have been due to the use of the gravity track. In any case, it does not seem likely that the sheathings could have been torn away to the extent indicated by any ordinary handling.

Figure No. 3 shows leakage caused by a broken door post. One often wonders if shippers realize the amount of rough handling their cars are sometimes subjected to while being switched around in the various terminal railroad yards. The leakage indicated in the picture is being stopped by the use of waste and nails.

Figure No. 4 shows leakage on account of the sheathings being loose. There is a heavy strain at the junction of the inside braces at the floor, between the door and the end of the car, which often causes the sheathings to spread away from the side sill. For that reason each car should receive special attention at such points when loading. The use of cheese-cloth in preventing the leakage of grain at these points is very effective.

The use of wedges, as shown in Figure No. 5,



"HORRIBLE EXAMPLES," FIG. 2.

is of little value in preventing leakage of grain that might be caused by loose end sheathings. Cloth should be used where there is evidence of weakened end boards.

The steamship *Oceana*, of London, put into the port of Derry September 18, and the captain reports that he had to abandon a large grain elevator in the North Atlantic, 100 miles off Tory Island. The *Oceana* left Barrow ten days previously with the elevator in tow for the purpose

of taking it to Montreal, and experienced terrific weather. Three men stationed on the elevator were washed off, but were rescued under great difficulties by the crew of the Oceana. The hawsers parted at the place named above, and as the ship was in danger the elevator had to be left to its fate.

CANADIAN GRADES AND GRADING.

The Canadian Grain Standards Board has created a new, or "commercial," grade for barley that weighs 42 pounds and under, and directed that, in case commercial grades are established for feed wheat, they shall be designated as "No. 1" and "No. 2 feed."

It has been brought to the attention of the



"HORRIBLE EXAMPLES," FIG. 3.

Board that, owing to the multiplicity of grades and subdivision of grades of grain presented for storage in Fort William and Port Arthur, although the ordinary storage capacity of the terminal elevators is not half filled, the necessity of reserving bins for small quantities of some particular variety of off-grade grain is tying up the handling facilities of the terminals. The statement was made that as a matter of fact over one hundred different grades and subdivisions of grades of grain are being kept separate in the terminal elevators. A committee was appointed to investigate the situation and report what action should be taken in the matter to relieve this serious condition of affairs.

At a subsequent meeting of the Board the committee made the following report, which was adopted:

That with the information before us we cannot see any valid reason why various grades cannot be stored in the terminal elevators as heretofore.

That to make any reduction in the number of classifications in which the inspectors have been dividing the wheat entails a loss to the farmers, who through misfortune or carelessness have grown off grades, and provision should be made for the proper storing of the same at the terminal elevators if at all possible.

We beg to suggest that working arrangements might be made between the various elevators, by which instead of each elevator providing storage room for each off grade, that certain off grades might be allotted to specified elevators, and all grain of those grades specified whether consigned there or not, and in this way the available storage room could be utilized to the fullest extent.

In this connection we would earnestly request the various elevators to arrange among themselves at the earliest date possible, by means of

a clearing house system, so the boats can get their full loads at the one elevator instead, as is now frequently the case, having to go to several elevators before they can complete their loads, thus causing great loss of time and consequently heavier freight charges, all of which in the end reduces the value of the grain to the producer.

The Board requested the chairman to follow up the recommendation in the above report and endeavor to get terminal elevators to agree on some form of clearing house based on the line outlined in said report.

OATS AND BARLEY MIXTURES.

"The mixing of barley with oats this year has been the salvation of the oats crop," said an oats specialist to the Tribune. "The poor quality of oats would have made it almost impossible to market a good portion of the crop if it was not possible to bring up the feeding value with a liberal mixture of barley. Speculatively, the barley market is having more influence on oats than anything else at the present time. While there has been practically no pressure on oats since the May was at 49 cents, there has been a steady buying of oats against sales of barley. An unusually large percentage of the barley crop was hedged in the local oats market, chiefly in the May from 51½ cents down. Northwestern interests, Milwaukee buyers, local concerns and the East all hedged barley here as a result partly of the high prices for oats. The taking off of these hedges now gives the oats market an exceptionally strong tone. In some instances about 5 cents profit has been shown on the barley, while the oats has shown little loss."

"Three carloads of oats confiscated in Atlanta on October 23; seven in Macon and twenty-five in all over the state of Georgia, result from the energetic campaign being made by Pure Food Inspector P. A. Methvin against dealers who ship



"HORRIBLE EXAMPLES," FIG. 4.

adulterated foodstuffs into the state," says the Atlanta Georgian.

"Most of these oats were found to be mixed to the extent of about 35 per cent with barley float, chaff and other stuff which is about as much benefit to stock as shavings or sawdust.

"The seizures in Macon came as a result of samples sent in by Inspector L. J. Kilburn of that city, and seven carloads were held up. After an investigation, Inspector Methvin learned that the Georgia dealers bought this stuff in good faith

for oats and as they could not sell this in Georgia without labeling it just what it was, they were allowed to send it out of the state.

"A dealer may sell oats that contain a large percentage of useless stuff, but they must label it as such, and in this case they cannot get the same price as for clean oats. The barley float which Inspector Methvin found in the condemned oats is secured from distilleries and dried and then worked off in oats. It is absolutely useless as a food.

"The next time violations are discovered the shipments will be confiscated."

A car of grain consigned to Lewis & Adcock of Nashville, Tenn., "was seized on October 14 by Pure Food Inspector Lynch of the United States Department of Agriculture. It is claimed that the car was sold to Lewis & Adcock for pure oats and that an examination revealed a mixture of



"HORRIBLE EXAMPLES," FIG. 5.

oats and barley, in violation of the federal pure food law," says the Nashville Sentinel.

"According to the statement of Samuel Lewis, of the firm of Lewis & Adcock, he ordered a car of oats in St. Louis. He states that when the car reached Knoxville he inspected the grain, and had reason to believe it was oats and barley mixed instead of clean oats. Accordingly he took the matter up with pure food officials of the Government, with the result that Inspector Lynch came here and, after an examination, confiscated the grain and the car in which it was transported to Knoxville.

"Mr. Lewis affirms that the pure food laws prohibit such a mixture as this in grain for interstate shipment, and consequently, he says, the St. Louis firm is made liable for violation of the law.

"Asked what advantage, if any, would be obtained in such a mixture, Mr. Lewis said that barley weighs heavier than oats, consequently, he said, barley may be mixed with oats and make the weight heavier but the quantity smaller. He said this car, which was supposed to contain 1,500 bushels, was 4,900 pounds short in weight.

"Mr. Lewis says the inspector will likely offer the grain and also the car for sale to the highest bidder. The shipment was received over the L. & N. railroad, and the car is the property of the Southern Railway."

The proprietor of the Olsen Commission Co. of Des Moines, who claims to be a correspondent of the Merchants' Stock & Grain Co. of St. Louis, was taken into custody at Belvidere, Ill., October 16. He is under indictment at Des Moines.

O. A. TALBOTT COMPANY.

Keokuk, Iowa, is most admirably located for doing a general business in grain and seeds, having all southern Iowa and northern Missouri, with their fertile acres, behind its water front, through which some of the strongest railroads in the West have extended their rails with Keokuk as river terminus. Here on the bank of the great Mississippi we find the elevator of the O. A. Talbott Company, shown in the picture.

This house is 40x90 feet in size on the ground and 125 feet high. It has thirty-two bins, and a basement under the entire building, with concrete floor in the pits and upper levels.

The equipment includes the largest size of corn sheller made and four corn cleaners of the largest capacity made. There are automatic double shovels for unloading cars, and all grain going

grain cargoes is becoming a very serious one. A great many ships have been found short within the past few weeks, and a general cry of protest has gone up all over the lakes. Junius S. Smith, lake weighmaster of the Corn Exchange at Buffalo, in a letter to a local vessel owner, gives the following list of shortages discovered by him since the first of the new crop has begun to come down: The Eagan, 579 bushels; F. T. Heffelfinger, 559; Scottish Hero, 236; Luzon, 304; Sultana, 665; Osler, 429; Empress of Midland, 263; Sinaloa, 305; Earling, 579; Harlem, 234; Midland Prince, 30; F. B. Squire, 97.

The fact that this wheat is worth about \$1 a bushel gives some idea of the amount of money involved in these shortages. A vessel owner said to the marine editor of the Leader: "When you stop to consider that we get only 1½ cents per bushel for carrying down this grain, and figure



TRANSFER ELEVATOR OF O. A. TALBOTT COMPANY, KEOKUK, IA.

into or out of the elevator must first pass through one of the hopper scales located in the cupola. The power is supplied by electric motors. There are three tracks for the handling of grain cars in and out.

The house is located along the line of the C., B. & Q., but enjoys the benefit of the union switching arrangements existing with all the other three roads entering the city (Rock Island, Wabash and T. P. & W.), so that the elevator is able to forward grain to Chicago or St. Louis (being about midway as to distance between these two markets) and make delivery not later than second morning out of Keokuk.

LAKE SHORTAGES.

At the annual meeting of the Lake Carriers' Association, to be held in Detroit next January, an effort will be made to have the organization give some attention to the matter of shortages in grain cargoes from the upper lake ports. It is hoped to have the form of bill of lading changed so that the vessel owners shall be relieved from responsibility in these constant shortages, and that the Lake Carriers' Association may adopt some resolution to remedy this state of affairs, says the Cleveland Leader.

Vessel owners in Cleveland, as well as at other ports, declare that this matter of shortages in

up our big running expenses, you can see that the vessel owners cannot stand this sort of thing. There is something radically wrong somewhere. It is the duty of the Lake Carriers' Association to put a stop to these big steals in one way or another. We are obliged to pay for every bushel short in the cargoes."

Most of the shortages are reported from the Port Arthur elevators, although the Sheldon Parks, loaded at Duluth, was recently reported 1,400 bushels short.

NEW MILL AND ELEVATOR AT BUFFALO.

James Stewart & Co., Chicago, started to drive the piling on November 2 for a 6,000-bushel flour mill and 300,000-bushel grain elevator at Buffalo, N. Y., for the Washburn-Crosby Co. The buildings will be erected alongside their present plant in that city.

The mill will be of reinforced concrete construction inside, the outside walls being of brick. The grain elevator will be of concrete, and both mill and elevator will be completed by the summer of 1909. The growing business of the Washburn-Crosby Co. made the new plant necessary, the demand for their products having largely increased the past few years. F. H. Henry is the Buffalo manager of the milling and grain business.

[From "Milling," Liverpool.]

GRAIN HANDLING IN ARGENTINA.

BY JOHN H. HUBBACK.

A series of changes in the mode of conducting the export grain business in Argentina is admitted to be very desirable. In my last article, allusion was made to the rapidity with which the extension of grain production has come upon the Republic. All concerned are surprised at the great results attained, and by no means has finality been reached, for it is already stated that the area under wheat next season will easily surpass all previous records. The arrangements for dealing with the business have, naturally, lagged behind, and very few of those interested have so laid their plans as to cope with the export of eight million tons, the figure indicated for 1908, including wheat, maize and linseed, with oats as a make-weight. Only Russia, and North America taken as a whole, have ever reached such a gigantic total. In Russia confusion of traffic has frequently ensued during seasons when such shipments resulted. In North America the railroads and lake navigation have long since attained a very high level of efficiency, while the financial side is dealt with on well-known principles, intended to give security to all parties.

In Argentina the Italian or Spaniard who grows the grain is, in many cases, little more than an agricultural laborer. He brings his produce to the station in small quantities and has to do the best he can in selling it, being quite unable to provide the buyer with any uniform quality, or other exact details as to what there is to be dealt with. The railroad officials will, possibly, allow him to unload the bags of grain on the premises, but will not issue any binding acknowledgment until they have cars ready to receive the goods, when the buyer is also prepared to have the weight and quality tested, and to exercise his rights as to rejecting such as prove inferior. These operations are performed on a "planchada," or platform, usually rigged for the occasion, and are interrupted in wet weather. There are but few stations out in the "Camp" where suitable shed or warehouse accommodation is provided, or where any effective distinction is possible between the property of different owners. It is not very difficult to see that the agents of a large exporter, who can afford to keep them at every necessary station, have an enormous advantage in such circumstances; indeed, at the times of greatest pressure these agents can virtually exclude other traders, as they can provide loads for every car as it comes to hand. There is nearly always a "car famine," to use an American phrase, at the busy times.

The condition of all grain has also to be watched when it is accepted from the farmer in any but the very dry seasons, and even then maize requires careful supervision. With so many difficulties causing delay, it is, perhaps, wonderful that the Republic can manage to get 300,000 tons put on shipboard for some consecutive weeks. But, fortunately, the whole of the crops are not subject to the drawbacks incident to small parcels, and some of the deliveries to rail are managed on principles more in accordance with modern methods. The small grower is not very anxious to take any trouble about the selection of seed, or preparation of land for sowing, being apt to leave the growth of weeds to the chances of the weather, trusting to a dry spell to keep them in bounds. Differences in quality and in cleanness are among the results of this policy, and such differences are very tiresome when the question of dealing with grain on a general or uniform basis comes to be considered. It does not seem easy to suggest any practicable method of storage at the country stations, beyond piling in bags under cover of sheds or warehouses, which should be of the simplest construction, allowing for a number of country carts to be unloaded at the same time. It is possible that an arrangement might be made for

loading from the shed into bulk cars and that the quality might be then determined, much as it is graded in the Northwest by the elevator companies, after it reaches the main depot. Any endeavor to carry out a system of grading at the "Camp" stations cannot succeed, if it be attempted when unloading carts into stores.

The elevator has been mentioned and its advocates at the interior stations are many. So far, however, no plan has been suggested which does not involve a very large original outlay, very large, at all events, in comparison with the possible receipts, taking the year round. Unless it occurred to some large trader to monopolize the elevator for three or four months by filling it up completely, there might be a good turnover at the first part of the year, but afterward it would be nearly useless in most seasons. There are, doubtless, important localities which would provide work for the machinery and staff sufficient to pay expenses all the year round, but these are few, and the rate of interest on capital outlay is a high one in Argentina.

It is easy to see that the grain business in the camp has not yet reached the point when effective security can be given to banks or other finance authorities; any change in the method of conducting the trade must, obviously, include the provision of such security based on the produce itself. It would scarcely seem to be necessary to define with great exactness either quality or weight; a very moderate extra margin on advances would cover these risks, provided there was due care taken to keep the goods intact. It must be remembered that the ultimate destination is the port of shipment, and that there is no reason for any lengthened period of storage, short of that destination. When once that is reached, there is not much further difficulty in the matter, for the conditions of this part of the business are well defined, and leave little room for inexactness.

The great ports for shipment are three—Bahia Blanca, Buenos Ayres and Rosario—while some quantity of grain is also loaded at La Plata, at Colastiné and at San Nicolas. Smaller places are Villa Constitucion, Boradero and Zarate. On the "Rivers," that is, on the River Plate or its tributaries, are located nearly all the ports named, with the exception of Bahia Blanca, which is tolerably sure to become the most important, being well served by the Southern and the Pacific Railroads. Each of these companies has its own "port," where it competes with the others in order to afford the best facilities to shippers, and the outlay at this place for elevators and other machinery has been very large. So rapid is the increase in grain exportation here that, even now, the facilities are not equal to the task of dealing with the traffic at the high speed demanded. Wheat is the main article in grain shipments, but a very considerable quantity of oats is now exported. The outlook is for a large increase a few years hence, as new lands come under cultivation, as these will find their natural outlet at Bahia Blanca. It is small wonder that railroad extensions and new concessions are many in this region; the general aim is, naturally, to reach out to fresh points, near or distant. One project is to make a line from Bahia Blanca almost due north to the tropical provinces. This will not be allowed to run close alongside any existing railroad, the national government preferring to see that new concessionaires take their fair share of pioneer work. But the enterprising promoter must have vast faith in the future of Bahia Blanca if he expects to draw traffic thither from the far north to the Republic, a region with obvious outlets by river navigation, and by comparatively short rail journeys to Rosario or elsewhere. A thoroughly up-to-date authority makes a statement which perhaps may be quoted here:

"The railway history of the Republic teaches that agriculture follows the railway in an extraordinarily short time, and the construction of more lines in the Pampa Central, and south of

Bahia Blanca should open out that immense tract very rapidly."—The "Times of Argentina," June 15, 1908.

This points to a future system radiating from Bahia Blanca to its naturally dependent territories, but is far from favoring any such trunk line as that communicating with tropical regions.

The next port, in geographical order, is that of La Plata, almost at the point where the fresh river water mingles with the ocean. Here is deep dock accommodation for the largest size of steamers or sailing vessels frequenting the River Plate, and here came regularly for years the English and French mail steamers. These, however, were quite recently diverted to Buenos Ayres on the completion of new docks there. The port belongs to the national government, which has exerted much energy and laid out a great deal of money in providing facilities for trade. A long row of sheds containing machinery for the transport of grain in bags is the latest effort. Charges are kept very low and, for the flush of the crop delivery, La Plata figures largely in the export list. It has also one further advantage, namely, its nearness to the open ocean. This enables shipowners to complete cargoes here, after taking in as much as can be brought

by means of shoots from the trucks down into the holds of the vessels. The system of elevators and warehouses is on a large and efficient scale, and all the railroads entering the city have access to the wharf. In common with the minor river ports, Rosario experiences considerable alteration in the depth of water, and great vigilance is necessary at times as to vessels getting away with the right quantity on board to allow of their proceeding safely down the channel.

DAWN ELEVATOR.

The Dawn Elevator at Dawn, Ohio (R. F. D. No. 2, Brookville, O.), certainly has one feature about it quite unusual to the country elevator—an environment not wholly one of barren railway yards and trackage, but of trees and foliage. In which respect, one must say, Wm. Reitz, the proprietor, is to be congratulated. He is further fortunate in that Dawn, located on one of the trunk lines of the Big Four System, in Darke County, is surrounded also by a magnificent farming country.

The elevator has about 12,000 bushels' capacity, with an addition to the main building that will hold about 4,000 bushels of grain as



GRAIN ELEVATOR AT DAWN, OHIO.

down in fresh water from the "rivers." Of course, no vessel loading at Buenos Ayres comes in to La Plata to complete, but a considerable number from Rosario and from San Nicolas find it suitable for their requirements. The railroad lines are the Southern and the Western, both of which use the government wharves, and find ample room for their traffic. The grain shipped here includes wheat, maize and some linseed. The agricultural district round La Plata is an excellent one and cultivation is on the most approved methods; no draught oxen for plowing are used in this neighborhood, and much of the region is devoted to breeding prize cattle, as well as horses. The estancias are managed from country houses surrounded by woods and gardens, in the hands of long-established Argentine families.

At a cost of about five million dollars there have been erected at Buenos Ayres a series of grain elevators fully capable of dealing with the traffic of the port. These are placed alongside the dock quays, where the largest vessels can be berthed, and the cargo shipped in bulk; while, if need be, the arrangements permit loading in bags, which is usual with maize and linseed. All the railroads having connection with the capital are also granted facilities for running trucks alongside the elevators, warehouses or vessels, as may be necessary. Loading direct into vessels is, of course, the most economical way of dealing with the grain, though it involves a good deal of manual labor and more waste than is incurred through the elevator.

Rosario has a high "barranca," or river bank, enabling shippers to load at a moderate expense,

well as affording some floor space for general purposes. There is also a crib on the opposite side of the driveway that has room for about 3,500 bushels of ear corn. So the plant is pretty well fixed to take in a considerable quantity of grain before being compelled to unload to handle its trade.

The house is now being operated by Leslie De Bolt and N. A. Niswonger, who will have charge until next spring, when the owner will take possession.

CHEAP CORN CRIB.

The Orange Judd Farmer describes a cheap and excellent farm corn crib which is made chiefly of woven fence wire:

"It is set on 4x4 posts with pans at their summits to prevent rats from climbing in. The sills are 4x4, scantlings 2x4 and 2 feet apart. The fencing is nailed to these on all sides and the door frame is similarly covered. The roof is made wide, so as to shed all possible water. The height, length and width may suit the farmer's convenience. A convenient width is about 5 feet at the floor, widening to 7 feet at the eaves. Owing to the very open nature of this crib, corn dries more quickly than in a slat crib, and as there is less chance for water to lodge in the cracks, the crib will be more durable than if built entirely of wood."

The steam barge Adam Cornelius left Milwaukee on October 29 for Buffalo with a cargo of 270,750 bushels of wheat. This is the largest boatload of grain in one consignment that has ever left Milwaukee.

[For the "American Elevator and Grain Trade."]

WHAT OF THE WHEAT?

BY F. S. RUTHERFORD.

Reports from the Argentine now come bright,
Telling their crop is looking all right;
That wheat will be plenty and millions to spare,
In the land where statistics are mostly unfair.

But what of the wheat of United States?
What of the latest estimates,
Showing the crop on every hand
Short in sowings, inferior stand?

What of predicted lessened yield
In nearly every winter field,
Indicating a small supply
From the crop we'll harvest by and by?

What of the great demand for flour,
Domestic use and foreign power?
Wheat for export selling fast—
How long will America's surplus last?

What of the farmer holding back
The little wheat he has in stack?
Will he sell it free when crop in ground
Giveth no promise of going round?

What of the man who selleth wind,
Thinking he's got the buyer skinned?
Won't he do some hustling great
To get the wheat and "pay the freight?"
St. Louis, Nov. 9, 1908.

[From Bulletin 65, Bureau of Statistics.]

GRAIN ELEVATORS IN RUSSIA.

BY I. M. RUBINOW.

An organized system of modern elevators, with mechanical appliances for quickly and cheaply cleaning the grain, would lessen the amount of impurities present, and a system of grading and classification would prevent mixing the different grades of the same cereal.

A commission established in 1888 to consider measures of relief against the fall in agricultural prices in 1883-1887 decided upon the necessity of building, at government expense, elevators at railway and waterway stations and storage houses in cities and towns not connected with railway systems. It favored granting to such institutions the exercise not only of technical, but also commercial, functions, such as advances of loans and the privilege of trading in grain on commission. The commission further recognized the advantages of an inspection system, but considered compulsory inspection premature, and recommended the introduction of an optional inspection system in the export ports.

In addition to the introduction of the elevator system, special measures were suggested for improving the condition of grain for export. In 1892 a commission to consider the entire subject of the grain trade recommended government control of all grain exports, with absolute prohibition of exports containing over a definite maximum of impurities.

Seven years later the conference of 1899, which reconsidered the entire grain trade, again recommended government control of exports; but its recommendations were of a less drastic nature, substituting for absolute prohibition of exports below the standard a system of graduated fines. Yielding to these recommendations, the Ministry of Finance introduced a plan of such legislation; but it met with serious opposition on the ground that it might lead to an undesirable decline of exports. The plan was not adopted.

The Commercial and Industrial Congress, which convened in Nizhni-Novgorod in 1896 during the Pan-Russian Exposition, also reiterated the necessity for elevators and storage houses which should improve the condition of grain, reduce the cost of transportation and storage, and advance loans; and the Congress pointed out the desirability of extending government assistance to all efforts to build elevators, and also recommended a gradual introduction of optional grading by the existing elevators acting in harmony with one another.

But while the agricultural class, bent upon

obtaining a higher valuation of grain, invariably advocated government regulation of elevators, the grain trade saw in the lack of order and organization a smaller evil than in the paternal attitude of the government. What the grain dealers feared was a compulsory system of inspection and a limitation of impurities to which government ownership of elevators might lead. But the "let-alone" policy seemed to threaten the country with a constant decrease of grain exports, which the government considered very undesirable, and therefore the entire problem was very thoroughly discussed anew at the Conference on Improvement of the Grain Trade, which was called together in 1899. At this Conference government representatives met the representatives of estate holders, of the grain trade and of the railways. The representatives of each class endeavored to bring the elevators under its own control. The estate holders held that the elevators must be turned over to the zemstvos; the railroads wanted the elevators put into their hands. As a compromise the Conference resolved to encourage the building of elevators, no matter by whom, so long as they were subject to government control; public elevators should be encouraged, but private parties should be refused the right to build them. The building of elevators and storehouses should be left to private initiative, but the large central elevators should be built according to one general plan. A system of compulsory grading was again found premature, but efforts at grading from time to time were to be encouraged.

Finally, when the extensive Special Council in Regard to the Needs of Rural Industry was called together in 1902, it was recognized that while the elevators built within the preceding fifteen years have not realized all the advantages expected, yet they have not been useless; but that, while their mechanical functions, such as storing, cleaning, drying, loading, etc., have been utilized, their commercial functions, such as the introduction of a system of grading and inspection and trade by inspection certificates, depended upon the entire organization of the grain trade and were impossible where such organization did not exist. In other words, the hope in elevators as such had to be abandoned, and the necessity for extensive changes in methods of agriculture and commerce was recognized.

With the exception of a small private elevator in Riga, the first public elevator in Russia was erected at Eletz, a grain trade center, by the local zemstvo in 1888, with a capacity of 400,000 poods (about 240,000 bushels) of wheat. The following year a large private elevator was opened in St. Petersburg with a capacity of 900,000 bushels. Since then the majority of the elevators have been built either by the railways or by the government and turned over to the railways.

According to the latest data there were on January 1, 1900, under the control of the railways 62 elevators with a total capacity of 11,200,000 bushels, and 198 warehouses, some of which had no mechanical appliances for handling grain, with a combined capacity of 14,300,000 bushels. The dates of their erection throw some light upon the extent to which expectations were realized.

One elevator was built in 1890 on the Southwestern Railway in Odessa, with a capacity of 900,000 bushels; five were built in 1891, three in 1893, two in 1894, twenty-seven in 1895, nineteen in 1896, four in 1897, and none from 1897 to 1900. While data since 1900 are lacking, it is probable that a few elevators have been built since that year. The average capacity is small, being only 180,000 bushels of wheat.

The largest elevators besides the one in Odessa are two in Nikolaiev, with a combined capacity of 1,060,000 bushels, built in 1893; one in Saratov, built in 1896, with a capacity of 600,000 bushels, and one in Moscow, built in 1895, with a capacity of 820,000 bushels. If these five elevators are excepted, the remaining fifty-seven have a combined capacity of only 7,820,000 bush-

els, or an average capacity of only 137,000 bushels each.

The building of elevators, which received great impetus in the middle of the nineties, has suddenly almost ceased, because it did not realize expectations. Not only has the capacity of the elevators remained small, but, judged by the quantity of grain handled, the facilities have not been fully utilized. In 1893 the quantity of grain handled amounted to 117.2 per cent of the capacity of the elevators; in 1897 it increased to 161.8 per cent of the capacity; but in 1899 it decreased to 115.9 per cent—at best about one and one-half times the capacity.

Some elevators have done a great deal better than the average; thus, one Nikolaiev elevator, with a capacity of 110,000 bushels, has handled as much as 3,000,000 bushels; the one at Moscow 2,700,000 bushels, or over three times its capacity. But even the most active Russian elevators do not stand comparison with the American, and a great many did not handle throughout the year a quantity equal to their capacity. The total quantity entering elevators annually probably does not much exceed 18,000,000 bushels; assuming an equal quantity for the warehouses, only 36,000,000 bushels (about 1,000,000 tons) pass through these storage houses out of a total of from 10,000,000 to 11,000,000 tons transported on railways and waterways, or from 9 to 10 per cent. Evidently the elevators have not yet affected the grain trade very much.

Ordinary grain-storage houses, sometimes provided with simple apparatus for unloading grain, are more popular. Most of these were built between 1894 and 1896. A few have a considerable capacity, notably the one in Ekaterinoslav, with a capacity of 690,000 bushels; Windaw, Rybinsk, and Chistopol, 600,000 bushels each; but a vast majority are small, the average capacity, these four excepted, being only 40,000 bushels.

Most of the railways which carry large quantities of grain have few elevators, and these do not constitute a system. The only exception is the Ryazan-Ural Railway, which on January 1, 1900, had 26 elevators and 121 grain-storage houses, with a combined capacity of 9,540,000 bushels.

In comparison with the American elevator system these figures appear quite insignificant. While complete statistics of the capacity of American elevators are not available, it is sufficient to state that Chicago alone had eighty-nine elevators in 1906, public and private, with a combined capacity of 63,545,000 bushels, or two and one-half times the combined capacity of the elevators and plain storage houses of the entire Russian railway system, and that the nineteen so-called regular elevators recognized by the Chicago Board of Trade have a capacity almost equal to the combined capacity of the 62 Russian elevators and 198 warehouses.

Besides the function of cleaning and grading the grain, another argument in favor of establishing an elevator system in Russia is found in a lack of sufficient storage facilities, which often deprives producers of the opportunity of holding grain and tends to cause gluts in the markets.

Lack of sufficient storage facilities is not the only cause of the backward condition of the Russian grain trade nor can an elevator system entirely cure it, but that insufficient storage facilities aggravate the condition there can be no doubt. The peasant almost always, and often the large estate owner, is forced to sell grain as soon as harvested, or sooner, because of need of ready cash. The organization of state and railway credit to some extent relieved this need of cash, but it afforded the estate owners greater relief than the ordinary peasants. The unsatisfactory condition of the country roads in winter also compels the delivery of grain to the railway station in early autumn.

The lack of storage facilities in the village is another factor working in the same direction. When grain is delivered to a station where there is no elevator it should be shipped at once. If it

is not, the result is likely to be congestion at the stations, with millions of bushels of grain lying in the open air and suffering from the damaging influences of inclement weather.

Finally, the absence of sufficient elevators makes the cost of intermediate steps in the marketing considerably higher, and, in view of the lower price which Russian wheat commands as compared with the American, every small increment in the cost of marketing is a serious matter to the Russian wheat grower. When the loading and unloading of grain from wagon to car and from car to barge or steamer are done mostly by human labor, the cost of the grain is naturally higher, notwithstanding the low cost of labor. It is officially estimated that the port expenses alone in various Russian ports amount to from 2.5 to 6 kopecks per pood (3.57 to 8.56 cents per cental, or 2.14 to 5.13 cents per bushel) of wheat.

To show the technical backwardness of the Russian system of marketing, it is sufficient to mention the one operation of loading grain into the ship. The loading of 3,000 to 4,000 short tons of wheat in St. Petersburg takes from 5 to 10 days; in Libau the average loading is about 500 tons per day, or six days for a cargo of 3,000 tons. In the Black Sea ports, many of which have elevators, the loading is done somewhat faster, or about 1,000 tons per day; so that a cargo of 5,000 to 6,000 short tons of grain is loaded in less than six days.

Compare this with elevators in New York, which load 6,000 short tons in from three to four hours, or with the record made by a steamer at Fort William, where 198,000 bushels of wheat were put on board in one hour and fifty-seven minutes, or at the rate of 3,046 tons per hour, or more than fifty tons per minute.

In their main object—that of introducing a universally accepted system of grading and trading by certificates of inspection instead of by sample—Russian elevators have failed up to the present time. In the beginning of enthusiasm for elevators, suggestions of immediately introducing an obligatory system of grading were many; in 1890-91 the government took many preliminary steps toward such a measure. But the difficulties were numerous, and in time the suggestions were limited to an optional system of grading, until it is now admitted that an obligatory system can not be introduced by the government, but must grow with the development of the grain trade. Nevertheless the efforts made in 1890 are interesting as pointing out the difficulties met with.

As soon as the first elevators were constructed, some system of grading became necessary in each, in order to facilitate the handling of the grain, since an elevator could not work under a system in which it was necessary to preserve the identity of each separate lot. A system of classification and grading was therefore elaborated by the committee in charge of the St. Petersburg elevator in 1890; and in the following year, after various changes were suggested, the Ministry of Finance submitted the plan, which embraces twelve varieties of wheat, each with many grades, to the grain-trading interests of the ports and internal markets. The principal reasons for the complexity of the scheme proposed were the numerous varieties of wheat raised in Russia. An official publication enumerates and describes more than twenty varieties. . . .

The scheme of grading recognized twelve principal varieties, differing from one another in color of grain (light red, dark red, white, motley); in hardness (grains either flinty or floury, soft); and in the shape of the kernel (roundish, plump, or elongated). While the American system of grading was generally accepted as the example to be followed, it was criticized in Russia because it left too much to the individual judgment of the inspector. On account of the lack of experienced inspectors in Russia, and in order to safeguard the interests of the grain owner, the Ministry of Finance made an effort to apply

a fixed rule to the grading of wheat. While the effort has not succeeded, the plan is interesting, nevertheless, as showing a possible solution of an important problem.

According to this scheme, there were seven grades for each of the twelve varieties, each grade based upon its natural weight, which was expressed in "funts per chetvert." . . .

The universal introduction of this plan of grading was never accomplished, but, since the use of elevators was almost impossible without some such system of grading, the elevators built, or authorized to be built, were given authority to form a working system of grading from year to year, subject, however, to the control of the central government.

Though the rules of the various elevators, approved by the central government, often vary in details, yet in their essentials they are fairly uniform. While the proprietors of elevators, whether a zemstvo or a railway, have the right to appoint their grain inspectors, yet these appointments must be confirmed by the Department of Commerce and Manufactures (a branch of the Ministry of Commerce). For the control of the grain inspectors, a local committee is usually appointed, consisting, in addition to the grain inspectors, of representatives of local grain exchanges, of city councils, and of railways when the elevators belong to the railways, the grain inspectors representing a small minority of the committee. This committee annually makes up the standard grades of cereals before the commercial movement begins, controls the activity of grain inspectors, and hears appeals from those dissatisfied with the grading. Samples of standard grades are required to be publicly exhibited. The great drawback to successful operation, however, remains; for, even when the local trade accepts the standard and grading established by the committee, the foreign trade refuses to do so, and no amount of government compulsion within Russia can force a change in the attitude of the European buyer. Only the organization of Russian trade can force such a change and, while many efforts have been made in that direction, they have not proved successful. Moreover, as only a small proportion of Russian grain passes through the elevators, the latter do not hold decisive power. The slight advance that has been made may be shown by the fact that as late as December, 1906, a convention of the southern grain exporters in Taganrog again pointed out the necessity of standards as well as the difficulty of standardizing grain in different ports, because of the great differences and varieties, and the still greater difficulty of inducing foreign buyers to recognize the decision of the Russian trade.

DULUTH CERTIFICATES.

The London Corn Trade Association having expressed to the Department of Trade and Commerce at Ottawa "considerable uneasiness" in regard to the question of Duluth inspection of Canadian wheat going through in bond, the Department gives the nervous Englishman the information that "the inspection at Duluth is a Canadian subject sent down there and paid by the Canadian government; that his certificates are accepted as of identical value with those issued at Winnipeg, Fort William, Port Arthur and every other point in Canada; that, in the event of any claims or complaints against these certificates, communications should be addressed to David Horn, Chief Inspector of Grain, Winnipeg; and that this Department takes full responsibility for all these certificates in every way, exactly the same as if they were issued at Winnipeg."

A Boone, Ia., farmer recently delivered to a local elevator 17,200 bushels of corn, receiving therefore a single check for \$12,390. This beats the Jefferson man who got a check for \$7,026 for a single "bunch of corn."

COMMUNICATED

[We invite correspondence from everyone in any way interested in the grain trade on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

NEW BUYER AT CHAMPAIGN.

Editor American Elevator and Grain Trade:—
E. E. Derrough, formerly of A. D. Derrough & Son, grain dealers at Sidney, Mahomet and Champaign, Ill., has assumed the management of the Champaign Cereal Mills and Elevator, and will handle grain on his own account and is open for bids either I. C., Wabash or Big Four tracks, Champaign, Ill.

Yours truly,
Champaign, Ill.

C. A. D.

GRAIN DRIERS AT PHILADELPHIA.

Editor American Elevator and Grain Trade:—
In your issue of October 15, in a brief notice of the new floating elevator provided for the export trade of Philadelphia by the Pennsylvania Railroad Company, you make a misstatement which should be corrected, when you say that the grain drier furnished by the latter company at the Keystone Elevator is "the only one supplied by a railroad in Philadelphia." As an actual fact there is a new and modern drying plant at the Port Richmond Elevator of the Philadelphia & Reading Railway Company, recently installed, that is available to the trade and under the supervision of the inspection department of the Commercial Exchange, which through its grain committee has accepted the control and approved the tariff of charges for the service performed.

I am, very truly yours,

FRANK E. MARSHALL, Secretary.

Philadelphia.

OBJECTS TO TERMS USED.

Editor American Elevator and Grain Trade:—
Referring to the report of the arbitration committee of the Grain Dealers' National Association—being one of the parties against whom a decision was rendered—we object to being termed "mean and ignorant," as we accepted the decision, and paid the award.

It is true that we withdrew from the Association, as being of no advantage to us, but on the contrary a disadvantage, which we had a perfect right to do and we are willing that anyone who cares to do so, may review the evidence, and any correspondence relating to same, and let him decide whether there is anything "mean or ignorant" in our conduct of the case.

We proved, to our own satisfaction, that we shipped the identical lot of wheat from which the sample was taken by which it was sold, and we furnished official certificates that the wheat shipped was "up to sample."

The exception we took to the committee decision was that, after furnishing this evidence, and the fact that all sales are made in this market, the same as in all leading Western markets (unless otherwise stated) are Cincinnati terms, our evidence was thrown out and the case decided on the evidence at Baltimore. But, having paid the award, we had dropped the matter, and charged it up to "experience."

Yours,

LOUDON & CO.

Cincinnati, Ohio.

On account of the drop in the price of rice, farmers in parts of the Texas field are preparing to use their crop for feeding purposes. They estimate that with rice at 75 cents per bushel and oats 62 cents per bushel, they can grind corn and rice together and make a stock feed far superior to the best oats at a cost not exceeding 50 cents per bushel. Unless there is an advance in the market within a short time, it is estimated, a large amount of second and third-grade rice will be taken out of the warehouse and used for feed.

[For the "American Elevator and Grain Trade."]

OHIO GRAIN NEWS.

BY H. L. SPOHN.

Considerable apprehension has been felt as to the fate of this fall's sowing of wheat. In the first place, the acreage will be greatly deficient because it was impossible to plant wheat on account of the extreme drouth. The cold dry weather has also been unfavorable for the growth of the wheat that was planted, with the result that the plant is exceedingly small and weak and will require considerable growing weather before winter sets in if it is to withstand the severity of this climate. The temperature fell to 17 degrees below freezing this week, and it is hard to say whether this will result in damage or not. This rather unpleasant prospect for next year's harvest has caused wheat holders to hang more tightly than ever to what they have on hand, and the movement has been very light. Ordinarily at this time of the year some unloading is expected by farmers who are obliged to raise money to meet taxes and other obligations which fall due, wheat being a usual source of cash income for this purpose. It is noticeable that money is being raised from other sources this year, however, farmers preferring to hold their wheat until they can determine more definitely what next season will bring forth. The mills throughout this section are finding no difficulty in securing sufficient quantities of wheat to meet their needs as their requirements are limited by a very light demand for both flour and millfeed. There is no exporting being done from Toledo of either wheat or flour. While there is close to half a million bushels of available wheat at Toledo the bulk of it is in the hands of the millers who refuse to sell even at present prices. Receipts have been extremely light and the little that has come in has been quickly taken to replete the stocks of the local mills. The result is that with neither export or domestic demand the wheat market has given way to the more active operations in corn. It is estimated that the area sown this fall is only about 76 per cent of that of last year.

The trade in oats has also been very light, with small receipts and a lack of the brisk demand which ordinarily characterizes the Eastern markets. Clover seed receipts, which for weeks broke all previous records, averaging more than 1,000 bags per day, have also dropped off materially and prices have shown a weakened tendency, due, it is claimed, in part at least to the light acreage of wheat sown this fall.

The central feature of the Toledo market at this time is corn. An extensive business is being done under the most flattering conditions. Receipts have been the heaviest during the past few days that this market has known at this season for more than ten years and the quality is superb. Nearly 250 cars of corn came in during the past week, the bulk of which graded contract or better. Much of that coming in now is grading No. 2 Yellow, with a moisture test below 16. The quality in every respect is far superior to last year's stock, the bulk of which did not grade contract until after the first of February. It is estimated that the receipts from now on will be increased, as farmers seem disposed to sell corn at present prices and hold their wheat awaiting future developments.

Considerable damage has been occasioned by fire in the Sciota marsh near Ada, Ohio, large quantities of corn having been consumed in the burning muck. The fires burned beneath the surface, making it unsafe to go upon the land to haul the crops off. Large areas fell in where the flames had eaten their way through the peat deposits, and to make matters worse there was no supply of water with which to fight the fire.

So well were the members of the National Hay Association entertained at Cedar Point during their convention held there the past summer, that a rule heretofore unbroken was ignored and the Association has voted to meet again next year at the same place, and Pres. Boeckling, of the Cedar Point Resort Co., has received a notice to that effect from

P. E. Goodrich, secretary of the National Hay Association.

The Mill Creek Valley Starch Co. of Cincinnati, capitalized at \$150,000, recently made an assignment, John H. Goyert being named as assignee and given permission to continue the business. Pres. Charles W. Schmidt estimates the assets at \$100,000 and the liabilities at \$96,000. The high price of corn and slow collections are said to be the cause of the trouble.

Great preparations are being made for the first annual exhibition of the Ohio Corn Improvement Association, which will be held at the State University at Columbus, on November 23, 24 and 25. Prizes amounting to several hundred dollars are offered for the best exhibits of corn, and farmers throughout the state are preparing to enter the contest, showing every evidence of extreme interest in the affair. Following is the committee in charge: V. M. Shoemaker, Columbus; R. H. Owen, Marion; L. P. Bailey, Tacoma; Howard McCune, Wilmington; W. M. Spencer, Washington C. H.; D. M. Weaver, Leipsic; Charles McIntyre, Chancellersville.

Toledo, O.

GLASCO ALFALFA MILLS.

Glasco, Kan., is located in the famous Solomon Valley, where alfalfa has in recent years



ALFALFA MILL OF CHARLES HENNING, JR., AT GLASCO, KANSAS.

been added to the list of farm products that are putting wealth into the possession of the people. There as elsewhere in the alfalfa country, the mill for reducing the hay to meal, in order that no part of the valuable plant may be lost, is coming to be a more frequent feature of the landscape.

The buildings of the typical alfalfa mill are like those on the premises of Charles Henning, Jr., at Glasco—not pretentious, utility being their chief value. This particular mill is 30x100 feet on the ground and 16 feet high to the eaves, giving a mill and packing room 30x40 feet in size and a loose hay room 30x60 feet in size. The machinery is a Halstead Grinder, Monitor Packer, Culver Dust Collector and 22-horsepower steam engine and boiler.

This equipment gives ample capacity to take care of the trade at present; and of course there is no difficulty in disposing of the products.

Wheat shipments from Portland, Ore., in October reached 1,818,400 bushels to foreign ports, with probably 400,000 more coastwise; barley shipments were 340,946, making about 2,500,000 bushels of grain for the month, which beats all previous records.

The railroads of the Northwest delivered to the Minnesota grain terminals in eighty-one days, up to October 19, no less than 80,850,000 bushels of wheat, of which Minneapolis handled 44,143,540 bushels and Duluth 36,706,460 bushels. This record beats all previous ones for equal time.

[For the Oklahoma Grain Dealers' Association.]

MUTUAL INSURANCE: ITS EFFECT ON RATES AND COST.

BY C. A. McCOTTER.

The fire insurance business is often called a "trust." The term will not apply, as regards joint ownership of the various companies; but there are grounds for complaint in the matter of joint control of prices. For illustration, all the insurance rates of the Mississippi Valley are made by an association of fire insurance companies known as the Western Union, with headquarters in Chicago. While within its territory of control, there are various rating bureaus for cities and for a whole state, some known as "independent bureaus," and there may be associations of insurance agents to make rates, it is a fact that no rate schedules are used for any class that do not have the approval of the manager in Chicago, while most of the rate schedules used by raters are furnished from the Chicago headquarters. In fairness, it must be said that so vast a business as fire insurance could not be conducted successfully or without a great expense were each company to make its own rates. Fire insurance, as it is conducted to-day, is the result of years of experience. The fault is due to the system, which in method is no different than fifty years ago, and associations formed

not so much for improvement of the business as for control of prices. All associations formed for the control of prices without improvement in the business, and prices through such control, are subject to criticism.

One thing to be noted is that the companies forming the Western Union are only a fraction, probably about one-half, of all the companies doing business. Like the Standard Oil Company, ownership of all the business is not necessary to dictate the price. However, like the Standard Oil Company, a good deal of coercion is used. The business of one outside company can be fought with the profits from controlled territory. The lesson has been learned from experience by the non-union companies, and published rates are followed even though there are no Western Union companies in the same agency. All fights, as to theories or methods of business, are carried on between the companies, but the property owner has no recourse from the prices charged. Competition is killed as to price.

Control of this combination has been tried through legislation and other means to no avail, as the companies can prove it impracticable to make rates individually; and no solution for compelling competition has been found under their system of doing business. Competition in localities will not break a widespread monopoly. It must be a general competition brought to bear at every point. In fire insurance there has been some effect on insurance cost by rigid anti-compact laws and well supported state companies.

This is noticeable in Nebraska and Iowa; but the laws have been nullified by legal decisions, and in the end the local insurance companies will be driven into the combination. Such was the case in Kansas, which built up a substantial state company, now a member of the Western Union.

Why does a fairly successful company throw up its individuality and join a combination to control prices? First, a stock company is a profit-making proposition, with no sentiment for its policyholders, and is bound to use every advantage possible for profit. Second, when it wants to extend its field outside its local influence, it comes up against the combination and is compelled to join. Nearly all Union companies made their start under the non-union banner, and their so-called love of the "dear people" lasts as long as there is the most profit in it.

Mutual fire insurance is the only lasting and continuous competition to keep down rates. First, the manufacturers, fifty years ago, united in the New England mutuals under so rigid mutual rules that competition now calls for rates not one-fifth the old price. The most practical illustration is the flour mill mutuals of the West during the past fifteen to thirty years; and to-day the old line rate schedule is 25 per cent less than formerly, while a specially low rate is made in competition on a very modern mill. The retail lumbermen of the country have gone through a similar experience of reduced rates through the competition of their mutual companies. The most recent example, and one familiar to you, is that of country grain elevators. In 1902 a new country elevator schedule was promulgated at about 50 per cent advance, under the claim that elevator premiums did not pay elevator losses. The grain dealers of the country united and formed an elevator mutual, which was patronized everywhere in the Western Union territory. Before that company had insured 1,000 of the supposed 20,000 elevators of the country, a revised rate schedule was published and some classes of elevators rated lower than the first rates.

The mutual companies, to which reference has been made, are not of the pass-around-the-hat order so generally criticised for small amount of assets and large amount of unlimited liability. They are substantial companies, handled by men of insurance ability, with cash and contingent assets that will compare with any kind of fire company. It will be noted that the most successful mutual companies have been those devoted to a special class of property. Their reputation is such that their policies are sought in every section of the country.

The effect of mutual insurance, organized under and controlled by good mutual laws, is noticeable according to the recognition given mutual insurance by the states. In the New England states there are dozens of good mutual companies, and that section profits by the lowest rates of any of the states. The Middle States, such as Ohio, Michigan, Indiana, Illinois and Wisconsin, have liberal laws and a number of the best mutual companies. Agitation about an insurance trust is very small in those states. If not satisfied, most of the citizens can turn to good mutual companies or organize a company of their own, which fact the stock companies recognize in making their rates. What a contrast west of the Mississippi River, where there are probably not over five mutual companies known outside their state borders, and where few states authorize, as purely mutual companies, the mutual companies of other states. The result is there are more complaints and attempts to control rates by legislation in a Western state than in any three states east of the Mississippi River.

All states have laws to license, for purpose of control and taxation, the corporations of other states doing business in such states. There are special laws for the license or authorization of insurance companies. These laws generally provide that the licensed company shall have assets

equal to those required of similar companies organized within the state.

Among its several committees the Western Union has a legislative committee to take care of all legislation. This committee is represented at every session of every legislature in every state within its territory. The purpose of a lobby may be legitimate, but its work is in its own interest and never that of the people. The insurance lobby has influenced the legislation of every Western state, and before the benefits of mutual competition were recognized in those states. The result is there are no laws for the licensing of mutual competition in the Western states. The worst of it is that the people cannot succeed in getting such a law. The desire for it is not centered enough and the insurance lobby will work against it. The state of Indiana has failed to authorize outside mutuals. Such a law was presented to three successive legislatures and vetoed by the governors. At the fourth trial, the bill was supported by five Indiana mutual companies. Not a person appeared against it except the Western Union's legislative committee, attorneys and agents. It required the hardest work to pass it with a handicap amendment. It is well to state that the interest of the Indiana mutuals was because, under the retaliatory laws of other states, they could not be admitted to those states.

The property owner has the right of buying his insurance where he sees fit, and the insurance company the right to sell him a policy, but the business cannot be carried on without the observance of some technicalities of the law on the part of the insurance company. This is not agreeable to the mutual insurance men. They are not a class that violate any laws or rules, but, to use an old expression, they are "between the devil and the deep blue sea." Competitors have lobbied laws the mutual companies cannot comply with, and, on the other hand, retail lumbermen, flour millers or grain dealers demand the right to unite with their fellows in the companies organized for their mutual benefit. Blood is thicker than water, and the millers, grain dealers and other classes of business men have the right to unite in any organization for their mutual benefit as long as they do not interfere with the rights of others. The mutual secretaries have not refused to give the advantages of their companies to the owners of any good property. The result is that a great many thousands of dollars of mutual insurance is carried in the West, to advantage of the policyholders and the harm of no one, except that the states have not received the customary taxes.

THE ALLOWANCES AGAIN.

An effort is being made to revive the "elevator allowances," the abolition of which has been ordered by the Commerce Commission to take effect on January 1, 1909. The Missouri River towns recently held a conference on the subject, the result of which was that the Kansas City Board of Trade decided to apply for an injunction to prevent the order's going into effect.

More lately—during the past few days in fact—another conference was held at Chicago, among the cities represented being Chicago, Louisville, Cincinnati, Indianapolis, Cleveland, Toledo, Mansfield, Pittsburg, Buffalo, etc.

While the Chicago Board of Trade will take no part in the affair, the elevator interests have decided to take action to annul the Commission's order, taking the position that the withdrawal of the allowances is equivalent to an advance in the rates—to them; but no action will be taken in the East until the Kansas City petition for injunction is passed upon.

The railroads, all of which have given notices of their intention to obey the Commission's orders, are pleased with the position of the Chicago Board, which is interpreted to mean the collapse of the objections to the order. The "allowances"

are a big drain on railroad treasuries. It is stated that the cash paid out by a single eastern system for elevator allowances in a single year has been approximately \$500,000 and that the combined elevator allowance amounts to several millions of dollars. The position of the railroads is that elevation is a charge which should follow the grain and should not be paid by a railroad. This is the view of the Commission.

The "allowances" matter is an old one. The first decision in the case was in the famous Peavey Elevator case at the Council Bluffs, or Missouri River. This case went to the Commission three times, the last decision being that the allowance of three-quarters of a cent per 100 pounds for elevation of grain was illegal. Then St. Louis asked for a reopening of the case, and Chicago intervened, with the result that the Commission decided that the allowances must cease everywhere. Chicago had asked in the last case that the allowances be equalized. The attitude of the Chicago Board of Trade is that it will make no difference to that interest if the allowance is stopped everywhere.

SOUTH DAKOTA ELEVATOR.

Gettysburg, S. D., a county seat town, is also a large market for the grain and stock grown away out there in the West where less than a generation ago was a wilderness, peopled only by savages, the remnants of whom still live on the



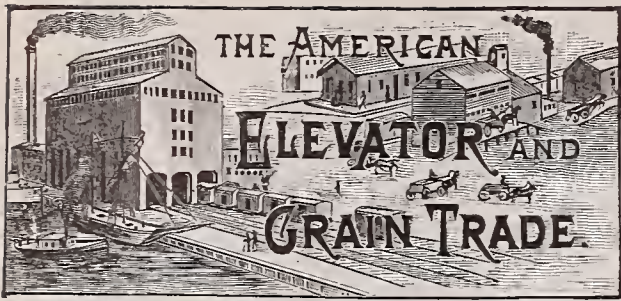
D. H. COWAN'S ELEVATOR AT GETTYSBURG, S. D. neighboring reservations. The engraving hardly does justice to the plant that D. H. Cowan is operating there to handle the grain that is marketed beyond the mills operating and buying grain there. His buildings, however, include an elevator 30x30 feet in size and 40 feet high, and a flat house, 30x70 feet and 10 feet high to the eaves, together with coal sheds and coal scales and a general office building with scales at the beginning of a 50-foot driveway. The shipping is via the Chicago & North-Western Ry.

CORN IN THE NORTHWEST.

Beating ordinary expectation by nearly three weeks, the first lot of new crop corn of the Northwest arrived in Minneapolis on October 17. It attracted much attention at the Chamber of Commerce. There were two cars and they graded No. 3 yellow.

"This is a remarkable movement," says the Minneapolis Journal. "New corn, ordinarily, does not reach Minneapolis until much later in the season, and it is even more remarkable that the grade should be so high, for in the fall curing process, facilitated by frosts, an arrival of No. 3 yellow corn is not ordinarily recorded here until about December 1.

"The grain trade of the entire United States will find interest in the arrivals, as there has been a strained supply situation in corn the country over for some time owing to scarcity of corn carried over from the old crop. Yankton, S. D., loaded the corn and shipped it to Poehler, Minneapolis, by the Great Northern. The fact that the two cars brought 73 cents and 73½ cents a bushel, a high price for corn, is a favorable prosperity index for the Northwest, as corn has become an important crop in Minnesota and South Dakota.



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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., NOVEMBER 15, 1908

Official Paper of the Illinois Grain Dealers' Association.

OATS AND THE PURE FOOD LAWS.

The seizure of several cars of oats in Georgia and Tennessee under the pure feedstuffs law of Georgia and under the National act in Tennessee puts a new face on the oats trade, at least in the Southeast. The high price of oats and the abundance of feed barley, coupled with the poor quality of the former and the always higher feeding value of the latter, have this season stimulated barley mixtures with oats even to a greater degree than usual. In fact, barley this season has been "the salvation of oats." That objection to these mixtures should come, then, from the Southeast, where, in fact, the demand for such mixtures may be said to have originated years ago, and where there are no cereal mills as consumers, was a distinct surprise.

But what one doesn't quite understand is why the grain was seized. It is hardly likely that the certificates of inspection under which the oats were shipped would fail to note the fact that the oats contained barley, if the amount was perceptible; so there could hardly have been any deception as to the character of the grain, in which case the pure feed laws do not, as we understand them, make even visibly adulterated feedstuffs contraband, or "impure" foods of any sort subject to seizure.

Apropos the last statement the association's secretary reports that in answer to an inquiry by the Southeastern Millers' Association, F. L. Dunlap, acting chairman of the Bureau of Chemistry of the Department of Agriculture, says: "In the hypothetical case which you state, I beg to say that an interstate shipper of No. 2 wheat who places any percentage of bin-burnt wheat therein [the grading rules of the shipper's market excluding bin-burnt wheat] would be liable to

prosecution under the present law. I shall be glad if you will indicate where such cases could be found and evidence could be secured to recommend their prosecution."

Perhaps, on second thought, the mixer's troubles may be on the increase, and his coming lot after all not entirely a happy one.

SCALEAGE AT BALTIMORE.

The action of the Baltimore Chamber of Commerce in bringing before the Commerce Commission in a direct way and for the first time the question of elevator "scaleage," or dockage, as it is usually called in the West, is a genuine public service. The truth is, that much and long as these deductions, varying with different markets, have been objected to, the question of their lawfulness has never been submitted directly either to the courts or to the Commerce Commission, nor has there ever before been a railway tariff filed by any road that has referred to this matter of scaleage deductions. At a time when the deductions are being abandoned in the West (even the Kansas City Board of Trade in October endeavored to abolish them there by voting 70 to 54 to repeal the 100-pound dockage rule, which, however, was not done because of the two-thirds rule), their revival in the East comes in so sinister a form that the Baltimore Chamber's action is peculiarly timely and necessary.

Aside from the gross injustice of the dockage, which we believe practical terminal elevator men will agree is unnecessary for their protection, because grain does not in the long run shrink in storage, the attorneys of the Baltimore Chamber will contend, and the contention is as unique as it seems conclusive, that if the proposed deductions are a part of the rate, being referred to in the published tariff, and are intended to advance the rate, which in fact they do in effect, they are illegal; if not a part of the rate, then the deductions constitute an appropriation, or confiscation, which will act as a practical discrimination against Baltimore in favor of other markets which do not make such deduction.

UNIFORM GRADES.

Journals like the "Commercial West," having only incidental interest in the grain trade, persist in estimating the importance of uniform grades and grading from the point of view of the export trade, which is that of the Agricultural Department also. But that is not the point of view of grain dealers in general. They understand well enough that the foreigner probably gets what he is willing to pay for, and, besides, so few Americans are interested in the export trade that the wails of the foreigner do not greatly distress the greater number of them. Not that American grain dealers of any sort are indifferent to the "square deal" to our foreign customers, nor to the conditions that surround the business of the exporters; but the real demand for uniform definitions and grading in practice is one that grows out of the exigencies of the domestic trade and the practical impossibility of buying grain in the country and shipping

it to different markets if each has a different rule for grading it. Receivers, too, have "become sick and tired," as a St. Louis friend puts it, "of complaints of country shippers that the same character of grain grades higher in one market than in another." It is to put an end to such complaints, and especially to give greater simplicity to the business in the country by "calling a spade a spade" wherever it is bought and sold, that is behind this call to the exchanges of the country to accept the principle of uniformity unreservedly and to put it into practice now.

SIZE OF CARS.

With the return of business activity in this country, signs of which are visible on every side, will come the car problem again, and also that of getting cars of size to fit one's needs as a shipper. It is apparent that freight cars cannot all be of an arbitrary size and an arbitrary carload rate made on that maximum basis if all classes of business men are to be served. All shippers cannot be expected to use the large capacity cars, for the reason that they cannot always find customers who can handle very large quantities, either because of their lack of capital or because of absence of storage space.

Here, for example, is a case of the way the railway practice of furnishing cars without paying attention to the size of car ordered works out. Secretary Lachmann of the Wisconsin Millers' State Association ordered a car to load 55,000 pounds. A new car was set in, but the floor contained so many cracks that he would not load it. He asked for another car, and one of 80,000 pounds' capacity was set in. He called the agent's attention to the size, and stated that he desired to load only 55,000 pounds, the stated minimum weight for an 80,000 capacity car being 72,000 pounds. When a freight bill was presented for this shipment, charging for 72,000 pounds minimum, the shipper refused to pay on the 17,000 additional pounds, and the claim Mr. Lachmann filed has had no attention from the railway.

The unfairness of the railway action is apparent; and the practice can hardly fail to be generally oppressive if the roads continue to build the big cars only and permit the smaller ones to wear out and go to the scrap heap.

ABOUT OATS.

The cause of two short crops of oats coming immediately after two very large crops, both the latter having been exceeded in quantity but once (1902) in our history, has naturally awakened inquiry. The reason does not seem absolutely clear, but the experiment station men in letters to the O. J. Farmer agree pretty well that the light crops of 1907 and 1908 were due to the excessive moisture and warm weather at seeding time and immediately after, both conditions that are unfavorable to oats, although the plant at the beginning of its growth looked so well the Government experts, being thoroughly deceived thereby, reported the condition high—in 1908 as 4 per cent above the average and in 1907

as only 9 per cent below, from which condition, however, in both years, it rapidly and continuously declined until harvest.

The Wisconsin station attributed these two bad crops in that state to rust, which appeared first in the south end of the state and is now working north at the rate of 12 miles a year.

One point of value the O. J. Farmer inquiry brought out, and that is that in both Wisconsin and Ohio in both years the 60-day varieties were the best yielders, in both quantity and quality. None of the stations think the poor crops were due to imperfect seed. So there is no reason to be alarmed for the future—if we get proper seeding weather.

AGRICULTURAL DEPARTMENT AND INSPECTION.

The correspondent of the Minneapolis Journal at Washington has attempted to keep its readers informed with respect to Government inspection of grain, and in doing so has attributed to the Department a decided bias in favor of taking unto itself that function. He informs us, therefore, that the proceedings at St. Louis in reference to inspection "have not changed the attitude of the Agricultural Department toward a Federal inspection law."

But is the correspondent quite sure that he himself understands the attitude of the Department toward grain inspection? It has been our understanding that the Department, instead of being favorable to Federal inspection, is rather anxious not to assume or be saddled with that duty—not, at least, until it shall first have developed by investigation at home and abroad a scientific method of inspection, by which it is hoped to eliminate as far as possible the uncertain factor of human judgment and therefore human fallibility.

In fact, it is not the Agricultural Department, strictly speaking, but the Senators from North Dakota who have been behind this agitation at Washington for Federal inspection, and which, as appears from Senator Hansbrough's speech to the Minnesota branch of the Society of Equity, they mean to continue at the approaching sessions of Congress.

THE RAILROADS.

Mr. Clark's paper on the "Interdependence of Carriers and Shippers," read to the late National Convention, was highly appreciated and complimented by those who heard it, and no doubt has been by the larger number also who have read it. But, it seems to us, not to be captious, of course, that Mr. Clark rather overstates the matter in declaring, in substance, that railroad prosperity is the cause of general prosperity. "On the prosperity of the railroads depends," he says, "very much, even the general prosperity of the entire country." Is not this rather putting the cart before the horse? The railroad is not a producer, except in the sense that all distribution is a part of production. But if the people be not producing, there is no work for the distributors, including the carriers, whose part in productive distribution may be even less direct than that of the merchant. The railroad merely acts as a carrier, under directions, and in other respects

is merely a destroyer of products. The fact that it buys much does not make it a prosperity maker, since it buys nothing that is not to be used for purposes ending in destruction.

The railroads have been spendthrifts in the past; even those which long ago exploited the new West, for which Mr. Clark thinks they deserve especial commendation, did so at the expense of the general Government, whose princely gifts of lands were ample, without other contributions of money, to build those roads if the work had been done in business-like and economical manner, which was not the case. For railroad men have never been either business-like or economical in the handling of their capital, and now they and the public suffer from abnormally large fixed charges that do not represent the permanent improvements they should represent.

Why, then should the carriers be exempted from the same natural law that affects other classes of business men who suffer for their extravagance and lack of thrift or from the depression in business which a financial crisis always involves, and from which they expect and get no public relief? Why should the railroads, because they need the money, be permitted to raise their charges when their patrons are compelled by the exigencies of trade and commerce to lower theirs?

BUYING PER HUNDREDWEIGHT.

Many, perhaps most, Indiana corn buyers, owing to the absurd ear-corn-weight law of that state, which puts the Indiana ear-corn bushel out of line with the rest of the country, are now buying ear corn by the hundredweight, as is usual there in the fall. The practice is not one to be recommended, except under extreme conditions, for the reason that the hundredweight, as a grain unit, is an unfamiliar one and creates friction. This fact is referred to by the Huntington "Herald," which in a recent issue said:

A peculiar notion possessed by a number of farmers in the county—in fact, the number is so large that a number of people will not believe the statement—is that the buying by the hundredweight is but a plan of the elevator men to cheat them out of the price for their corn. It is a fact, astounding as it may seem, that one of them came to one of the reliable firms, which has been doing business in the city for years, and would not accept the price when figured by the hundredweight, but insisted, and would have it no other way, that the price of his corn should be figured by the bushel. During the winter months the price will be, without an exception, figured by the hundredweight, and as the spring-time approaches and the farmers loosen up the reins of their business dealings, to which they have held tightly in the winter, the price will naturally drift back to be made by the bushel. One farmer insisted that he be paid 50 cents per bushel, it made no difference what the price per 100 pounds, and when it was figured up it was found that he would have been losing by a few cents on the bushel in selling a crop of gigantic size. The reason the elevator men figure by the 100 pounds is that it is much more convenient. Everyone who has had the slightest dealing with arithmetic knows that to figure by tens is easier than to figure by other units.

This argument of convenience would be final if grain were generally bought and sold by the hundredweight, but as it is not, in any market in the world, save in California only, the convenience of daily reducing the basing bushel price to a hundredweight price when buying and back to bushel again when selling does not sensibly impress one. However, it

is really no one's concern save only those who do business in that way, and if their trade is satisfied with the system that ought to settle it for everyone else. But one may imagine that any system, though practiced by men whose honor is beyond question, cannot be a pleasant one that makes it necessary for the dealer to apologize for it or for the local paper to say, as the Herald does at the conclusion of the article just quoted, that, "A word to the farmers concerning the unchallenged integrity of the local grain men would not be in the least out of order."

THE CROP REPORT.

Apropos the Government crop report, which the committee of the National Association so highly commended, by a timely coincidence Chas. C. Clark, of the Bureau of Statistics, has published (Circular No. 17) an account of the making of the report, which, though rather lengthy, is republished on another page, and is worth reading.

The Holmes "leak" episode, which has given Mr. Holmes a long "vacation abroad," has really been a good thing for the report. It immediately directed public attention to the report in a way to put it up to the Department and Congress to improve its quality, as well as to guard against a repetition of Mr. Holmes's unfortunate inclination to leak information; and it is conceded that both conditions have been met. The authority of the report certainly is greater than ever before, and leaks, it would seem, are all but absolutely guarded against.

No doubt the Department in this as in other things will "fall down" now and then, and will experience the discomfiture of correcting in the fall or winter the blunders of previous months' guesses, for this is everyday human experience; but on the whole, public faith in the accuracy of the report has been materially strengthened since Holmes quit.

BUYING GRAIN ON THE COAST.

Since that very lively and energetic young man, Fred Muller, late of New Orleans, went to Portland, Ore., to be secretary of the Board of Trade, he has been engaged in an effort to make that body a "really-truly" trading institution, which should have something to say as to the prices paid for grain grown in the Pacific Coast country. But while many small dealers and the Board as an institution are back to back with Mr. Muller, his pet project has had pretty rough sliding.

For the reason that the trade of the Coast is in the hands of the exporters and the millers, who are, in fact, the only natural buyers; and it is pretty hard to see how it could be otherwise. The only *raison d'être* for a public exchange of this kind in Portland might be to influence the price paid by the exporters and millers to the grain producers; and it is claimed that although the Board has been in operation tentatively for only a short time it has benefited the farmer materially. That, of course, is a matter for proof; although *prima facie*, when a small group of people constitute the only market, there may be a chance for unfairness.

EDITORIAL MENTION

Country newspapers in the Northwest are still calling for Federal inspection of grain.

Shippers would have fewer off-grade cars if they would put cleaners into their elevators and use them.

They are getting mighty particular down in Georgia when barley isn't good enough as a "chaser" feed for inferior oats.

Look to your insurance and then look to your elevator protection against fire—see that you are protected in both ways.

While new alfalfa mills are getting to be common enough out West, few seem to be built in connection with grain elevators. Why not? Would it not be as germane to the business as a feed mill?

The haste with which the Northwest has forwarded its wheat crop of the year is evidenced by the fact that as early as November 1 some of the country elevators were being closed—for the season, perhaps; at least for some time.

Canada made a new record in October by importing about 9,000 bushels of South African corn, which went to one of the big mills for making white corn flour for baker's use. This is a far cry for corn, but at current American prices, and a surplus in Africa, the African has made a trade opening at least.

Kansas City is really trying to be good; so 70 out of 124 members of the Board of Trade voted the other day to cut off the elevator "lift" of 100 per carload of grain unloaded there; but 70 being not two-thirds of the whole membership, the "noble 70" failed and will have to try to get more followers for the next balloting.

The profitless attachment of Texas to cotton is confirmed by the official statement that the state had nearly 14 times as many acres under cotton as under corn in 1907. Yet the price of cotton has been tumbling while that of corn has been going up for two years past but without the Texas farmer's having discovered it, at least to the extent of adjusting his planting to the facts.

The Minnesota Board of Grain Appeals has taken up tentatively the recommendation of Governor Johnson made a year ago that the state establish a laboratory and employ a chemist for the purpose of inspecting grain after the manner of the miller—by chemical analysis to ascertain its milling value. The Board handed in its annual report to the governor a fortnight ago, but beyond the bare mention of the fact that they coincide with Governor Johnson's recommendation, nothing has been published, at least nothing of any practical plans to substitute that kind of in-

spection for the present one based on the physical appearance of the grain. Probably the proposed inspection may be intended as supplementary to the present system rather than a substitution for it.

A handsome trophy will be given by the Iowa Grain Dealers' Association at the Omaha Corn Exposition in December for the best bushel of oats raised in Iowa. Oats culture in Iowa needs a vigorous stimulation; and the grain men are wise to make the effort to revive the character and quantity of the cereal in that state.

It may be merely a coincidence; but since Argentina established at Buenos Ayres a veritable grain exchange, the crop news from that end of the hemisphere has seemed to have suddenly acquired all the erratic characteristics of North American crop experts' reports. Very likely they are quite as reliable as the northern samples; and just now they are certainly fully as wearing on the speculator's system.

The practical effect of the corn judging shows has been demonstrated in larger crops in many parts of the corn belt in recent years; but a specific case of interest is reported from Pottawattamie County, Iowa, where a farmer who paid \$15 for ten ears of show corn at Avoca last winter and then bought enough seed from the same field to plant sixty acres. His crop this year showed an increase of ten bushels per acre over last year's crop on the same land with the same kind of treatment all through the season. Pretty good profit on a single crop.

While H. T. Robson of Liverpool, a recent traveler in America, predicts "dollar wheat" as the regular thing hereafter, a miller out in Kansas "goes him better" by predicting that within a few years corn will sell for more than wheat. Well, corn isn't so very far behind wheat as it is; and certainly its consumption has been growing more rapidly per capita than that of wheat in recent years. Who shall say when or where it will stop? The more one thinks of the possibilities of corn, the more he is convinced that the man who wantonly sells a bit of "good corn land" at to-day's prices is inviting beggary in the future.

How little influence mere sentiment, such as, for example, that of patriotism, has on the movement of commodities in commerce and trade is well illustrated by the shifting of the route of wheat abroad from the head of the lakes. In the spring, when the rate *via* Montreal was lower than that *via* Buffalo, the latter market and the seaboard outlets from Buffalo were unable to get any business whatever. The trade was "ruined," and all interested in it were ready to "shut up shop" and quit in disgust. When, however, the fall trade opened, and the Canadian carriers had business getting the wheat out of Fort William to seaboard, the rate *via* the Canadian route went up from 3½ cents to 7 cents, and

since then Montreal has had no business; but Boston has been crowing over the "new records" it has been making with export grain. There are several morals to this simple tale. Work one out for yourself.

The farmers' organizations' attack through the attorney-general's office on the Minnesota grain exchanges has reached the Supreme Court of the state, before whom the case was argued on November 8. This case is a "left-over" of pre-election foolishness, and is a very good sample of the peanut type of politics. The argument of the prosecutor is that the exchanges ought to be dissolved because their rules, requiring that all members shall treat all shippers exactly alike in all things, constitute a "monopoly in restraint of trade."

Pennsylvania on November 10 started out of Philadelphia her first "farm special" railway train. Like its predecessors in the West this train had on board representatives of the State College of Agriculture, who delivered lectures at various stations on the Pennsylvania road. There were twenty-two stops of forty-five minutes each, the lectures being on methods for increasing the output of dairy products, the care of live stock, testing seed corn, especial stress being laid on the cultivation of alfalfa, which, because of the success that has been obtained by Western farmers in growing it, the State College authorities are endeavoring to introduce the cultivation of in Pennsylvania.

Harry W. Kress in one of his weekly letters makes a suggestion that has a good deal of meat in it, if the shipper of the f. o. b. "3 or better" kind would but take time on a wet day, when business is dull, to think it all out. He says: "By holding up the standard of your grades you prevent the mixers from being your competitors." Exactly. But the shipper on track doesn't try to keep up his standard; at least, not above "3." Why should he? If it goes "3," he is safe. He has to stand an arbitrary discount if it grades below 3, but he gets no premium if it grades "better." Why should he? He agrees in his contract to give all the profit in "better" to his buyer, the mixer; and so, as Mr. Kress says, he makes the mixer his competitor, and one who takes every drop of real cream there is in the grain business. Mr. Kress says further: "The severest competition the country dealer has to contend with is from such places as Chicago, where they have all the latest up-to-date mixing facilities." But these facilities would be absolutely harmless (rather, they would be actually beneficial) to the country dealer if he did not queer his own game by selling his stuff "3 or better" and by so doing give the mixers all the best (No. 2) grain at a "3" price, or less than it is actually worth. No mere "mixing" can bring 3 corn up to No. 2; but the mixer can take the country shipper's "3 or better" and make a lot of No. 2 out of it and still have a lot of "3" left. The country dealer could do the

same trick in his own elevator if he would take the trouble to do it; at any rate, he need not sell his No. 2 stuff as "3" unless he wants to; and if he does he should not complain when he builds up good stiff competition to himself in the city by doing so.

Speaking of its refusal to reopen the "elevation allowances" matter at the request of the Missouri River grain exchanges and the Wabash Railroad, the Commerce Commission says: "It is incredible that in the midst of the present demand for an increase in freight rates any railroad can be found which will insist upon a continuance of this practice, the only effect of which upon the railroad is to deplete its revenues and demoralize its rates." So even the Commission is unable to fathom the real depths of railway managerial vagary! How, then, can the "common peepul" be expected to do so?

All during the delicious days of a matchless autumn, the bears in corn and oats, says the poet of the Pope & Eckhardt Co.'s daily pean, sat "on the fence in the sunshine with faces aglow with grins and voices alert with prophecies of the deluge of new corn that is soon—they say—to depress prices. Overlooked is the fact that poor pasturage and the absence of the feed that growing winter wheat usually offers at this season of the year makes the feeding of grain to live stock this year unusually early and extensive." And now that the incomparable days are going, the new corn, it "cometh not, she said."

Inspector Culver at Toledo calls the attention of farmers to the necessity of care in selecting seed oats for 1909 to avoid mixtures. Pure white oats are the best paying variety now; but as this season's oats from Ohio and Indiana sent to Toledo contained a perceptible proportion of black oats, if that grain is used for seed next spring, the percentage of black oats may go as high as 25 per cent, which would take the grain out of the white oats grade and send them to mixed. This would mean a serious loss to the farmer directly, and would probably spoil the oats of those states for several years to come for the white oats grade.

It is rather encouraging in a way to know that when the Commerce Commission has examined into a case exhaustively—or, at least, two or three times, going over each time the same state of facts—the courts are coming to give the Commission some credit for exercising ordinary judicial gumption in making their rulings. At any rate, the Federal Court at New York, in refusing to set aside the Commission's order reducing grain rates from Buffalo to New York and to Boston, a matter the Commission had gone over at least twice, said that, while it was not within the province of the court to say what was a reasonable and what an unreasonable rate, and while the court did not desire to interfere in a matter which is already in litigation in another form, still "the presumption

is that the Interstate Commerce Commission carefully considered conditions before making the order."

The uniform bill of lading has gone into effect, but the opposition to its use is becoming more positive, and will be still more so when shippers begin to sense through their pocketbooks what a burden it has put upon them. Every shipper should make it his business to protest to the Commerce Commission and join with the grain dealers' and other shippers' associations in their work to have it set aside or modified.

Bridgeport, Conn., on October 28 had a "Korn Karnival," prizes being offered by the local merchants for "best grain," etc. An examination of the list of prizes awarded, however, leads to the conclusion that the New England pumpkin pie captured about all the "plunder" in the way of prizes that was worth carting off, and "Korn" got lost in the chase for specimens of the succulent product of the vegetable that grows between the rows. "Punkin pies" and the baby show are about all a "Korn Karnival" amounts to in Connecticut, except the name.

The great corn show of Illinois this year will be that at Springfield on November 23-28, which will well be worth dealers' attention. The entries are so numerous as to have outgrown the original building devoted to the Exposition, and two large tents as an annex will be needed to house the exhibits, which will include besides grain a large number of specimens of game birds and waterfowl by the State Game Commission and an expert who was in charge of these features at the recent New York Sportsmen's Exhibition. Altogether, as will be seen by notice elsewhere, the "Show" will be a most interesting one.

In printing on another page an article by Secretary McCotter of the Grain Dealers' Fire Insurance Company of Indianapolis, which was prepared by him for the Oklahoma Association, and which we have been compelled to hold standing in type for some months awaiting a chance to give it publication in our usually crowded columns, we must plead the indulgence of the author for some verbal changes and omissions made by us to relieve the article of apparent anachronisms; but the main point of the argument—to wit, the necessity of more enabling legislation in the West to facilitate the organization of mutual fire insurance companies and to permit "foreign" mutual companies to do business—is still there; and, at this time, it merits the studied consideration of business men, more particularly grain dealers, whose own success in operating mutual companies of the right sort has been so marked. The immediate problem in nearly all the Western legislatures is the circumvention of the "insurance lobby," which in so many states has hitherto been able to prevent legislation favorable to the mutual companies or which has been able to render ineffectual the legislation obtained,

which has appeared to be sufficient for the purposes of mutual companies, but which, when put to the actual test, has been found full of vexatious and impracticable conditions. As the legislatures of many states are about to meet in biennial session, grain dealers everywhere will do themselves a service by giving mutual insurance legislation some attention, and especially by talking seriously with their own legislative representatives about it.

The decision of the Commerce Commission denying the petition of the Missouri River crossings to reopen the "elevator allowances" case puts an end to that disturbing influence so far as the Commission is concerned. There is expectation that the petitioners will go into court for relief; but as the case is already there on an action to enforce the U. P. contract to pay the allowances at Omaha, outsiders may as well save their expense, and let the original parties to the agreement settle it.

The "elevation allowances" case is again in the arena, in spite of the refusal of the Commerce Commission to reopen it, although the announced effective date of the order of the Commission has again been advanced, this time to January 1, 1909. A conference was held recently of the exchanges in towns on Missouri River, and on November 9 still another was held at Chicago, at which representatives of Chicago, Louisville, Cincinnati, Indianapolis, Cleveland, Toledo, etc., were present. As a result of this meeting it is expected an application for an injunction will be made in some one of the cities named to present the question to the courts in the East, while Kansas City has already decided to apply for such interference with the Commission's order in the courts of the West. In the order complained of, denying the petition to reopen the case, the Commission say:

Our order in these cases [Missouri River petitions] runs only against points upon the Missouri River, and one ground most earnestly insisted upon by the petitioners is that to stop the granting of these allowances upon the Missouri River while they continued elsewhere would be to create a serious discrimination against that locality. This is self-evident. A cardinal consideration in reaching our conclusion was the belief that in no way could discrimination and preference be prevented except by the complete prohibition of these payments and privileges. The principle of our decision applies everywhere. We expect that the decision will be universally accepted by carriers.

It has been so accepted, all the roads having served notice on the various grain organizations throughout the country that they purpose carrying out the order of the Commission. To do so will save the railroads a large amount of revenue annually; and it is, therefore, understood that they are glad to comply with the order. It is only the elevator men, beneficiaries of the allowances (directly and more especially indirectly), who want them continued, not the exchanges as a whole; for should all the allowances be abolished absolutely, as they should be, and all markets treated alike in this respect, they would all share alike in the grain without artificial "pulls" against them, although some individuals might not be so well pleased with their own profits in the game.

TRADE NOTES

The Milwaukee Grain Dryer Co. of Milwaukee, Wis., has been incorporated with a capital stock of \$50,000. The incorporators are James W. Perkins, William O'Connor and Herman J. Eskuche.

Every elevator owner who handles corn should write for the free booklet on the Hess United States Moisture Tester. It will be mailed on request by the Hess Warming and Ventilating Co., Tacoma Building, Chicago.

The Richardson Scale Co. of New York and Chicago are looking for a big business now that the election is over, and already they have had indications that their expectations will be realized. So far they have had a most successful year.

The Nebraska Corn Products Co. of Beatrice, Neb., recently placed an order with the Minneapolis Steel and Machinery Co. of Minneapolis, Minn., for a 16x36 Heavy Duty Twin City Corliss Engine. It will operate their new plant, which is now in process of building.

The National Folding Machine Co. of Sidney, Ohio, in its Chief Ear Corn Feeder has a machine which is specially recommended for grain elevator work. The feeder does not take up much room and is made of best material throughout, insuring wear and long service.

"Conveying and Transmission" for October, published by Stephens-Adamson Manufacturing Co., Aurora, Ill., contains an interesting article on "The Working Demands in Conveying Machines," besides a number of illustrations of special conveying machines, and useful information on foundations for machinery, building in brick, wood, etc.

The N. P. Bowsher Co. of South Bend, Ind., recently completed an addition to their fireproof pattern storage and have made a number of improvements in their foundry. A new heavy planer from one of the leading makers has also just been added to their factory equipment, and some new tools built especially for their own use have also been installed.

B. S. Constant Co. of Bloomington, Ill., is remembering its friends this month with the gift of a foot rule. It has stamped thereon illustrations of their leading specialties for the grain trade, the Safety Manlift, B. & C. Chain Feeder and Conveyor and United States Corn Sheller. The success of these machines has been noteworthy and with coming prosperity they expect sales to go to new high records.

A machine that has proved a paying proposition for the grain elevator owner is the Marseilles Portable Grain Elevator and Wagon Dump, manufactured by the Marseilles Manufacturing Co. of Marseilles, Ill. It unloads the largest wagon in from two to five minutes and handles wheat, ear corn, shelled corn and, in fact, anything that can be handled with a scoop. It is easy to operate and is quickly and easily set up or taken down.

A call has been issued for a meeting to be held in the Auditorium Hotel, Chicago, Ill., December 9, at 10 a. m., to discuss and formulate plans for forming an association of gas and gasoline engine manufacturers and dealers, together with manufacturers of the accessories to gas and gasoline engines and of the trade press devoted to these interests. All those interested in the formation of such an association are requested to attend the meeting.

At the recent meeting of the Board of Directors of the Michigan Millers' Mutual Fire Insurance Co. of Lansing, Mich., Robert Henkel of Detroit, president of the Commercial Milling Company of that city, was elected president of the insurance company to succeed C. G. A. Voigt, deceased. Bela W. Jenks, of the Huron Milling Co. of Harbor Beach, was elected vice-president to fill the vacancy left by Mr. Henkel. To fill the vacancy on the Board of Directors occasioned by the

death of Mr. Voigt O. D. Chapman of Chesaning, Mich., was elected.

The Northwestern Seed Cleaner and Grain Separator Co. has been incorporated at Boone, Iowa, to manufacture and sell the Benson Seed Cleaner. The capital stock is \$20,000. T. A. Hanson is president of the company; L. C. Noland, vice-president; T. L. Jones, secretary, and Otto C. Herman, treasurer.

The United Cigarette Machine Co. of Lynchburg, Va., which has used several Foos Engines in their power plant for eight or ten years, has recently placed an order with the Foos Gas Engine Co. of Springfield, Ohio, for one of their 100-horsepower Multiple Cylinder Vertical Engines and Producer Gas Plant complete. This engine will be direct connected to a General Electric

partment, who responded quickly with three reels and one truck, and probably reached the fire within five minutes of the explosion. As the entire elevator structure and the south storehouse were completely in flames, the firemen attempted to save dwellings 160 feet southeast of the storehouse, but did not succeed.

"There was no wind at the time of the fire, but a house 250 feet away was blistered by the heat.

"The elevator contained seventy-six storage bins and one stairway in another bin; most of these were full of various grains, viz., oats, corn, wheat, barley, cottonseed meal and molasses.

"The processes were elevating, grinding (coarse), oat clipping, dry mixing (in a bin containing revolving paddles) and packing, and of



THE RICHFORD ELEVATOR DURING AND AFTER THE FIRE.

Dynamo to supply current for the operation of their magnificent new plant, which is nearing completion.

The Invincible Grain Door Co. of Chicago, of which B. L. Coon is manager, has a patent grain door on the market, which it is claimed meets all the requirements of a perfect grain door. The door is of steel and has pressure release which is said to be absolutely proof against leakage. It releases the grain in 30 seconds and is easily raised and handily swung free of the door opening. It can also be used for other commodities than grain, as it hangs on the ceiling and does not interfere with the handling of freight or merchandise.

RICHFORD ELEVATOR.

The insurance report on the destruction of the Quaker Oats Co.'s elevator at Richford, Vt., previously reported in these columns, says the "cause of the explosion is unknown. The explosion in which the fire had its origin was of such a nature that the entire elevator from top to bottom was instantly set on fire, and the flames were blown out through all openings. The roof was carried about 125 feet west, several freight cars were blown over and pieces of corrugated roofing were blown at least a quarter of a mile. There were a large number of cars in the yard and 51 of these were burned and the adjacent storehouse quickly ignited.

"Fire was fought by the volunteer town de-

these mixing and elevating only were going on at the time of the explosion.

"The elevator was lighted by electricity generated by a dynamo in the engine room and running at the time of the explosion. The wiring had been completely gone over about four months ago and the electrician who did the work states that all the cut-outs were of the plug type.

"The boiler house was wrecked by the explosion and fire, but the boilers did not explode and the 155-foot brick stack is not injured apparently.

"The fire wall between the two storehouses was 12 inches thick and extends 30 inches above the roof, which is flat, gravel. The loading platforms and wooden awnings over them extended beyond the wall and were not cut off. The storehouses were filled with sacks of bran and other feeds and this probably protected the wall to a large extent, for although the fire burned without restraint until the storehouse roof had fallen in, the wall was neither warped nor cracked by the fire."

Charles Weisman, an importer and grain commission merchant of Antwerp, Belgium, recently made a business trip to Minneapolis.

J. E. Mitchell, manager of the North Branch Grain Co., North Branch, Mich., for the past two years, will act as assistant manager and head bookkeeper of the Richmond Elevator Co.'s plant at Lenox, Mich. R. E. Keeler of Detroit has also been added to the company's office force at Lenox.

FACTS and FIGURES

Buffalo had its first arrival of grain for winter vessel storage about the middle of October—276,885 bushels of oats from Duluth.

The quartermaster-general recently made contracts for 9,000 tons of oats to go to the Philippines and rejected bids for 10,000 tons of hay.

Alfred Wannamaker, vice-president of the Toledo Grain and Milling Co., Toledo, Ohio, recently suffered a stroke of paralysis while driving his automobile in that city. His companion luckily perceived Mr. Wannamaker's condition and took charge of the machine in time to avert an accident. Mr. Wannamaker's side is paralyzed and his speech gone.

Early estimates of the clover seed crops were that this year's yield would equal that of ten years ago, say Zahm & Co., Toledo. "Since then the general opinion seems to have changed and many think that it will not be as large as expected. It is estimated the farmers have marketed about 50 per cent of their crop. This accounts for the big rush to the market early. Prices could not stand up under the movement, but since then the receipts have dropped to below normal for this time of year. We doubt whether the country dealers are holding anywhere near what they usually do on the average. This means that the farmer is holding the seed and he is the best equipped to do it. He is rich, does not need the money and will not sell if prices do not suit."

WHEAT RECEIPTS AT PRIMARY MARKETS.

Receipts of wheat at winter and spring grain markets for 19 weeks, since June, with comparisons, in bushels, compiled by the Cincinnati Price Current:

	1908	1907.
St. Louis.....	10,833,000	11,071,000
Toledo.....	2,794,000	3,484,000
Detroit.....	1,304,000	656,000
Kan-as City.....	24,520,000	20,016,000
Winter Wheat.....	37,450,000	35,227,000
Chicago.....	13,637,000	17,044,000
Milwaukee.....	5,627,000	4,353,000
Minneapolis.....	40,799,000	23,687,000
Duluth.....	32,115,000	22,500,000
Spring wheat.....	92,178,000	67,584,000
Aggregate 19 weeks.....	131,628,000	102,811,000

Total receipts of winter and spring wheat at primary markets nineteen weeks since June, 1908, with comparisons:

	Winter.	Spring.	Total.
1908.....	39,450,000	92,178,000	131,628,000
1907.....	35,227,000	67,584,000	102,811,000
1906.....	38,925,000	73,692,000	112,617,000
1905.....	44,761,000	75,759,000	120,520,000
1904.....	40,171,000	68,938,000	109,109,000

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, Aug. 8, 1908, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
Baltimore.....	797,000	24,000	237,000	184,000	.....
Boston.....	118,000	1,000	18,000	36,000	20,000
Buffalo.....	2,593,000	178,000	880,000	30,000	833,000
do. afloat.....	.....	.....	.....	.....	.....
Chicago.....	4,678,000	163,000	754,000	53,000	953,000
do. afloat.....	.....	.....	.....	.....	.....
Detroit.....	569,000	219,000	224,000	98,000	.....
do. afloat.....	.....	.....	.....	.....	.....
Duluth.....	6,330,000	.....	1,344,000	180,000	1,193,000
do. afloat.....	.....	.....	.....	.....	.....
Ft. William.....	3,082,000	.....	.....	.....	.....
do. afloat.....	.....	.....	.....	.....	.....
Galveston.....	564,000	183,000	.....	.....	.....
do. afloat.....	.....	.....	.....	.....	.....
Indianapolis.....	565,000	30,000	330,000	.....	.....
Kansas City.....	3,437,000	18,000	416,000	.....	.....
Milwaukee.....	615,000	77,000	385,000	33,000	873,000
do. afloat.....	.....	.....	.....	.....	.....
Minneapolis.....	12,094,000	.....	1,770,000	129,000	1,680,000
Montreal.....	630,000	4,000	103,000	54,000	103,000
New Orleans.....	528,000	143,000	121,000	.....	.....
do. afloat.....	.....	.....	.....	.....	.....
New York.....	2,357,000	41,000	1,022,000	97,000	199,000
do. afloat.....	.....	.....	.....	.....	.....
Peoria.....	1,000	22,000	771,000	24,000	9,000
Philadelphia.....	908,000	3,000	93,000	33,000	.....
Port Arthur.....	2,320,000	.....	.....	.....	.....
do. afloat.....	.....	.....	.....	.....	.....
St. Louis.....	2,735,000	6,000	933,000	34,000	184,000
do. afloat.....	.....	.....	.....	.....	.....
Toledo.....	442,000	162,000	361,000	82,000	.....
do. afloat.....	.....	.....	.....	.....	.....
Toronto.....	.....	.....	.....	.....	.....
On Canal.....	455,000	.....	13,000	.....	280,000
On Lakes.....	3,558,000	.....	457,000	46,000	351,000
On Miss. River.....	.....	.....	.....	.....	.....
Grand total.....	49,376,000	1,274,000	10,132,000	1,113,000	6,678,000
Corresponding date 1907.....	43,749,000	3,650,000	7,727,000	1,279,000	5,969,000

RECEIPTS AND SHIPMENTS.

Following the receipts and shipments of grain, etc., at leading receiving and shipping points in the United States for the month of October, 1908:

BALTIMORE—Reported by H. A. Wroth, secretary of the Chamber of Commerce.

Articles.	Receipts.		Shipments.	
	1908.	1907	1908.	1907.
Wheat, bushels.....	961,654	1,407,230	1,407,117	1,182,001
Corn, bushels.....	145,846	774,532	28,680	422,820
Oats, bushels.....	348,899	296,158	575	826
Barley, bushels.....	.....	.....	.....	.....
Malt, lbs.....	.....	.....	.....	.....
Rye, bushels.....	217,200	198,517	107,141	.....
Timothy Seed, lbs.....	4,780	9,625	1,541	3,187
Clover Seed, lbs.....	1,463	.....	835	721
Hay, tons.....	5,553	6,346	1,385	1,486
Straw, tons.....	.....	.....	.....	.....
Flour, bbls.....	367,117	297,386	207,365	223,239
Mill feed, tons.....	.....	.....	.....	.....

BOSTON—Reported by Daniel D. Morris, secretary of the Chamber of Commerce.

Articles.	Receipts.	Shipments.
Flour, bbls.....	228,814	226,054
Wheat, bushels.....	1,007,693	499,987
Corn, bushels.....	62,572	763,239
Oats, bushels.....	396,609	400,732
Rye, bushels.....	60,638	9,740
Barley, bushels.....	62,217	835
Flax Seed, bushels.....	.....	.....
Peas, bushels.....	29,271	14,707
Mill Feed, tons.....	1,684	3,051
Cornmeal, bbls.....	4,080	6,165
Oatmeal, bbls.....	16,699	9,046
Oatmeal, sacks.....	22,769	18,715
Hay, tons.....	8,430	12,470

BUFFALO—Reported by Walter J. Shepard, secretary of the Chamber of Commerce.

Articles.	Receipts.	Shipments.
Wheat, bushels.....	12,445,195	11,045,106
Corn, bushels.....	1,684,771	4,405,700
Oats, bushels.....	1,139,245	763,400
Barley, bushels.....	2,909,272	4,102,154
Rye, bushels.....	244,959	295,100
Timothy Seed, lbs.....	.....	.....
Clover Seed, lbs.....	.....	.....
Grass Seed, bushels.....	.....	.....
Flax Seed, bushels.....	2,320,250	1,379,000
Broom Corn, lbs.....	.....	.....
Hay, tons.....	.....	.....
Flour, bbls.....	1,581,539	1,454,871

Receipts were by lake. Shipments were by canal.

CHICAGO—Reported by Geo. F. Stone, secretary of the Board of Trade.

Articles.	Receipts.	Shipments.
Wheat, bushels.....	2,648,010	2,921,224
Corn, bushels.....	3,558,911	13,329,138
Oats, bushels.....	8,883,172	11,627,318
Barley, bushels.....	3,606,788	3,181,639
Rye, bushels.....	175,010	473,780
Timothy Seed, lbs.....	8,691,521	7,254,480
Clover Seed, lbs.....	1,507,050	292,815
Other Grass Seed, lbs.....	4,071,374	1,555,870
Flax Seed, bushels.....	502,286	290,246
Broom Corn, lbs.....	4,278,303	2,734,117
Hay, tons.....	26,911	31,149
Flour, bbls.....	987,736	792,965

CINCINNATI—Reported by C. B. Murray, superintendent of the Chamber of Commerce.

Articles.	Receipts.	Shipments.
Wheat, bushels.....	472,072	346,843
Corn, bushels.....	499,479	629,586
Oats, bushels.....	584,863	768,166
Barley, bushels.....	186,252	183,618
Malt, bushels.....	.....	.....
Rye, bushels.....	110,500	187,534
Timothy Seed, bags.....	10,848	11,640
Clover Seed, bags.....	4,756	3,091
Other Grass Seed, bags.....	12,689	18,036
Hay, tons.....	15,709	15,502
Flour, bbls.....	177,261	134,928

CLEVELAND—Reported by M. A. Havens, secretary of the Chamber of Commerce.

Articles.	Receipts.	Shipments.
Wheat, bushels, water.....	79,095	36,439
Do rail.....	85,000	.....
Corn, bushels, water.....	141,540	585,686
Do rail.....	.....	193,300
Oats, bushels, water.....	450,011	720,566
Do rail.....	256,000	.....
Barley, bushels, water.....	34,780	13,174
Do rail.....	.....	95,500
Rye, bushels.....	.....	.....
Flax Seed, bushels, water.....	.....	.....
Do rail.....	.....	.....
Hay, tons, water.....	7,012	5,097
Do rail.....	127	.....
Flour, barrels, water.....	105,270	64,440
Do rail.....	.....	.....

DETROIT—Reported by F. W. Waring, secretary of the Board of Trade.

Articles.	Receipts.	Shipments.
Wheat, bushels.....	686,936	168,885
Corn, bushels.....	132,265	551,157
Oats, bushels.....	384,000	286,405
Barley, bushels.....	138,000	87,397
Rye, bushels.....	63,600	54,949
Flour, bbls.....	31,400	20,200

DULUTH—Reported by Chas. F. MacDonald, secretary of the Board of Trade.

Articles.	Receipts.	Shipments.
Wheat, bushels.....	12,149,115	11,397,309
Corn, bushels.....	.....	44,742
Oats, bushels.....	1,525,247	681,070
Barley, bushels.....	1,542,250	3,108,314
Rye, bushels.....	248,258	209,578
Flax Seed, bushels.....	4,917,603	3,855,355
Flour, bbls.....	1,118,425	711,210

GALVESTON—Reported by C. McD. Robinson, chief inspector of the Cotton Exchange and Board of Trade.

Articles.	Receipts.	Shipments.
Wheat, bushels.....	819,920
Corn, bushels.....	1,670,320
Oats.....
Barley, bushels.....

KANSAS CITY—Reported by E. D. Bigelow, secretary of the Board of Trade.

Articles.	Receipts.	Shipments.
Wheat, bushels.....	4,100,400	3,639,000
Corn, bushels.....	462,250	675,000
Oats, bushels.....	741,000	825,000
Barley, bushels.....	20,900	35,000
Rye, bushels.....	34,650	27,000
Flax Seed, bushels.....	4,000	19,200
Bran, lbs.....	4,120	1,440
Hay, tons.....	18,510	23,580
Flour, bbls.....	20,600	13,600

MILWAUKEE—Reported by Wm. J. Langson, secretary of the Chamber of Commerce.

Articles.	Receipts.		Shipments.	
	1908.	1907.	1908.	1907.
Wheat, bushels.....	1,561,000	1,329,000	674,392	624,567
Corn, bushels.....	150,000	658,000	113,815	710,952
Oats, bushels.....	2,036,800	1,671,800	1,635,083	1,258,955
Barley, bushels.....	1,928,800	3,556,962	1,086,133	1,871,529
Rye, bushels.....	178,200	195,300	133,200	103,155
Timothy Seed, lbs.....	876,115	435,580	322,295	76,560
Clover Seed, lbs.....	1,380,531	577,610	324,235	42,691
Flax Seed, bushels.....	114,480	7,420	.....	.....
Hay, tons.....	3,855	2,697	147	48
Flour, bbls.....	293,375	334,775	509,638	355,894

MONTREAL—Reported by George Hadrill, secretary of the Board of Trade.

Articles.	Receipts.	Shipments.
Wheat, bushels.....	6,473,697	5,609,610
Corn, bushels.....	25,262	536,158
Oats, bushels.....	345,858	176,557
Barley, bushels.....	291,531	68,212
Rye, bushels.....	159,999	.....
Flax Seed, bushels.....	5,257	100,337
Flour, barrels.....	185,214	171,432

NEW YORK—Reported by H. Heinzer, statistician of the Produce Exchange.

Articles.	Receipts.	Shipments.
Wheat, bushels.....	5,549,100	4,264,800
Corn, bushels.....	259,750	1,345,850
Oats, bushels.....	2,211,000	2,366,300
Barley, bushels.....	1,148,200	207,800
Rye, bushels.....	153,100	83,850
Timothy Seed, lbs.....	.....	.....
Clover Seed, lbs.....	12,646	.....
Other Grass seed, lbs.....	.....	11,641
Flax seed, bushels.....	576,300	.....
Broom corn, pounds.....	.....	180,161
Hay, tons.....	32,058	.....
Flour, barrels.....	845,168	597,916

NEW ORLEANS—Reported by H. S. Herring, secretary of the Board of Trade.

Articles.	Receipts.	Shipments.
Wheat, bushels.....	701,000	600,100
Corn, bushels.....	284,900	152,000
Oats, bushels.....	311,200	349,500
Barley, bushels.....	.....	.....
Rough rice.....	.....	.....
Clean rice pockets.....	.....	.....
Hay, bales.....	48,190	73,223
Flour, bbls.....	56,000	48,285

Shipments include exports only. Through consignments of flour for export not included in receipts.

OMAHA—Reported by Edward J. McVann, secretary of the Omaha Grain Exchange.

Articles.	Receipts.	Shipments.
Wheat, bu.....	2,049,600	1,142,400
Corn, bu.....	460,900	1,289,200
Oats, bu.....	2,268,800	1,382,400
Barley, bu.....	184,000	101,000
Rye, bu.....	4,900	30,000
Flour, bbls.....	.....	.....

PEORIA—Reported by John R. Lofgren, secretary of the Board of Trade.

Articles.	Receipts.	Shipments.
Wheat, bushels.....	63,597	92,000
Corn, bushels.....	1,074,059	1,774,300
Oats, bushels.....	849,500	1,458,500
Barley, bushels.....	397,000	350,000
Rye, bushels.....	56,000	58,000
Mill Feed, tons.....	2,715	1,755
Spirits and Liquors, bbls.....	7,406	8,796
Syrups and Glucose, bbls.....	5,550	5,650
Seeds, lbs.....	60,000	60,000
Broom Corn, lbs.....	.....	735,000
Hay, tons.....	4,522	4,468
Flour, bbls.....	95,920	82,550

PHILADELPHIA—Reported by Frank E. Marshall, secretary of the Commercial Exchange.

Articles.	Receipts.	Shipments.
Wheat, bushels.....	2,867,935	1,491,513
Corn, bushels.....	81,131	536,066
Oats, bushels.....	496,358	647,115</

FIELD SEED SECTION

THE RISKS IN ALFALFA SEED.*

I can render alfalfa growers no better service in one brief communication than urge upon them, with emphasis, the utmost caution and painstaking in securing and sowing none but the highest quality of seed. This quality means not only seed demonstrated as 90 or more per cent germinable, but free from the adulterations and impurities likely to be found present, most frequently from carelessness or shiftlessness, but often from design, and sometimes from both. Alfalfa seed is expensive at best and doubly or trebly so if it will not grow or carries with it trash and quantities of other seeds which stock a field, a farm or a neighborhood with weed pests that interfere with or crowd out the alfalfa, displace expected profit with positive loss and provoke profanity.

Recognizing the fact that much of the seed on sale is entirely unreliable, the Agricultural Department at Washington, and some of the more wide-awake experiment stations, have been making tests to discover the defects and values of seed ordinarily found in the market, and some startling revelations are the result. The Washington investigators, for example, found in one pound of so-called alfalfa seed on sale 32,420 noxious weed seeds; in another 23,082, and in still another 21,848. Of the first-named pound less than 59 per cent was alfalfa; less than 29 per cent was germinable, and among its impurities were 5,490 seeds of dodder, surely the devil's own invention. One pound of another lot contained only a fraction over 5 per cent that would grow, and of a third lot but slightly over 6 per cent.

The Ohio Station bought for testing fifteen different samples—a dollar's worth each. A pound from one of these carried 18,144 lambs-quarter, or pigweed, seeds, and another 6,420 seeds of crab grass and 3,325 of foxtail. Seed supposedly costing \$7.80 per bushel was, when cleaned, found to have cost actually \$12.74 per bushel.

The Oklahoma Station, among many samples, tested one having 60 per cent pure seed and 40 per cent of impurities. Only 65 per cent was germinable. Another sample, "which at first sight would be classified as good," was found to contain per pound 453 witch grass seeds, 90 plantain seeds, 151 crab grass seeds, 90 wild carrot seeds, 453 foxtail seeds and 155 Russian thistle seeds. As the official who made this test says, if twenty pounds of alfalfa seed of this grade were used to sow an acre, one would have approximately two seeds of witch grass and two foxtail seeds for every ten square feet; four seeds of plantain, seven Russian thistle and six seeds of crab grass for each hundred square feet. These would doubtless grow and the mischief they might lead to nobody can estimate.

Among samples of "alfalfa" seed offered for sale Professor Roberts of the Kansas Experiment Station found one with more than 88 per cent of impurities and 34 different kinds of foreign seeds, and these constituted 31.5 per cent of the whole. In this lot were also 3.8 per cent of trash and dirt and 53 per cent of the seeds true to name were incapable of germination. Another sample was 79.3 per cent impurities and 53.3 of the remainder valueless. Twenty-six lots tested by Professor Roberts contained an average of 44.1 per cent of impurities, including eight different kinds of foreign seeds amounting to 4.5 per cent, trash and dirt 4 per cent, and 35.8 per cent of what was really alfalfa seed was not germinable.

One of the samples was 95.2 per cent impurities and 43.4 per cent of the rest was not germinable. But 20.2 per cent of the seed was true to name and capable of germinating. Using this sample as an example, Roberts says that, "Computed on

the basis of the cost of standard alfalfa seed, it would have taken 73.9 pounds per acre of this seed to give as much of a stand as could have been secured with 15 pounds of standard seed. To secure such a stand from the seed in question it would have necessitated the purchase of so much seed as to bring the actual cost up to \$11.92 per acre, making the actual cost \$49.26 per bushel. But this is not all. There would have been sown on the land over 4,000,000 weed seeds of various species, or 105 to the square foot." Of another sample he says, "The low germination per cent would have raised the cost per acre to \$5.75, besides sowing the land with 95,000 plantain seeds, 19,000 dodder seeds and 25,000 seeds of foxtail, or, in all, 167,000 weeds of various sorts."

Of course, as a matter of fact, where bad seed is sown the actual result is a weak, poor stand of alfalfa and a dense growth of weeds. The land has to be plowed up and reseeded, the use of the land for a year is lost, and it has become foul with weeds, many of which will be newly introduced and noxious in character.

These findings pointedly suggest that it is safe to buy seed of only a thoroughly reputable dealer or grower whose name and guarantee stand for something. Get samples early and test them. Learn positively that it is alfalfa seed, and not something else, and that it will grow. If more than 10 per cent fails to grow, don't buy it, for something is wrong. Choice seed, the only kind worth sowing, always commands a good price and is worth it. The Agricultural Department at Washington, or the state experiment stations, will test samples of seeds sent and report on them without charge.

CORN GROWERS' ASSOCIATIONS.

Indiana.—The fourth Indiana State Corn Show will be held by the Indiana Corn Growers' Association at Purdue University, on January 11-16, 1909. The premiums to be offered are many and liberal. A new class has been made this year for club exhibits. This has been done with a view to encouraging corn growers to organize for the purpose of studying corn and in order that the members of the boys' corn clubs may be induced to make exhibits. A corn club exhibit will consist of five ten-ear samples, any color, exhibited by five different persons. Each of the five exhibitors must contribute to the exhibit ten ears of corn, no more and no less, and no two samples may come from the same field. No exhibitor shall belong to more than one club. Entries must be made in the name of the club with the names of the five exhibitors.

Illinois.—The Illinois State Corn Exposition at Springfield on November 23-28 will offer prizes valued at \$530 for "best display by district school." The list includes an upright mahogany piano, two agricultural libraries and a miscellaneous school library of forty volumes, at a value of \$25. Beside these special prizes, the exposition will give \$75 in cash. The schools celebrated "Corn Carnival Day" on November 6 and on November 12 the best exhibits of corn were collected in the offices of superintendents of schools in the different counties, where the best district school exhibit from each county will be selected and forwarded to Springfield. At the show there will be only one district school exhibit from each county and the best of these will receive the above-mentioned prizes.

Capt. Dick Craine, in charge of the Ojibway Indian Reservation, will have an Indian Village installed in the Annex, where corn will be ground in the primitive manner by the use of hand mills. The Indians will also give their corn dances, which are among the most picturesque of their ancient customs.

Texas.—The annual meeting of the Texas Corn

Growers' Association will be held at Sherman on January 6 and 7.

Iowa.—Mason County, Iowa, farmers have organized the Mason County Corn Exhibition Association and will make an exhibit of corn at Springfield, Ill., on November 23-25. The committee in charge of the work are G. D. Sutton, C. A. McHarry and G. H. Mathers of Mason City and Frank Buorgelt of Havana. This committee will look after the county exhibit at the Illinois Corn Exposition as well as the organizing of the Association, the members of which shall agree to make an exhibition at least once each year.

SEED GERMINATION.

The seed itself is but a dormant plant securely housed in a shell or seed coat with a supply of food sufficient to last until it is able to shift for itself. The plant as it thus lies inactive in the seed is called the embryo. In this condition it consists of but one or two leaves known as cotyledons which lie folded around a short stem and root. The little stem has a bud on the end of it that is called the plumule, and which upon germination of the seed will grow and produce the main stem of the plant. Surrounding the embryo there lies, in some seeds, a mass of food stored for the use of the young plant in its first growth until it has reached the surface of the soil and has spread out leaves to the light and roots to the soil.

This supply of food is called the endosperm. It is largely in the form of starch in the majority of seeds, including wheat, corn, oats and other grains, but there are also present substances called proteids, similar in nature to the white of an egg. In a grain of corn the proteids are stored in the horny, almost translucent part of the seed, while the white part is fairly packed with starch. In some seeds, like the castor bean and cotton seed, the stored food is principally in the form of oil. Some seeds do not possess an endosperm. The bean is an example. Such seeds have very large embryos, which fill the entire seed coats, and the reserve supply of food is stored away in the huge cotyledons. When mature seeds are kept in a moderately warm, dry place they remain inactive, but still alive for many years. Pine seeds twenty-five years old have been known to germinate. Most seeds, however, will not maintain their vitality so long. Wheat, alfalfa and clover seeds begin to deteriorate very rapidly after the second year, but peas, beans and mustard seeds four years old may be expected to give a fairly good per cent of germination. Stories of wheat and other grains having germinated, the seeds of which were taken from the pyramids of Egypt, or from the graves of prehistoric races, may all be dismissed as impossible myths.

If the embryo of a seed is still alive it will germinate whenever the conditions become favorable. For germination a seed needs moisture, oxygen and a suitable degree of warmth. The best temperature for germination varies, of course, with different plants. Many small weeds may be seen coming up in the spring soon after the ground has well thawed, and when the soil is but a few degrees above the freezing point. On the other hand, seeds of plants which are native to warm climates will not sprout unless the temperature of the soil reaches 70 degrees F. or more. The best temperatures for ordinary plants range from 60 degrees to 70 degrees F.

The first step in germination is the absorption of water. This causes the seed to swell and in many cases the seed coat to break. The water is absorbed through the seed coats, and seeds in which these are thin and very permeable to water will germinate much more quickly than those with thick, hard coats. Cedars and the black locust have such hard-walled seeds that they will not germinate at all the first year unless subjected to special treatment, such as soaking in warm water. Many such seeds may be caused to germinate by burying them in moist sand and ex-

*F. D. Coburn, secretary Kansas State Board of Agriculture, to the Shawnee County (Kan.) Alfalfa Club.

posing them to alternate freezing and thawing during the winter.

All living plants and animals must breathe, or respire. Even, therefore, when the seed is in a dormant condition respiration is going on, but it is very feeble. If, however, the seed be not planted for several years this respiration is sufficient to wear away the life of the seed and ultimately to cause its death. This is the cause of the gradual decrease in its power to germinate, which has already been described in the discussion of the age and vitality of the seeds. Now moisture in the presence of oxygen and a suitable temperature serves as a stimulus to respiration. When therefore a seed is placed in warm, moist soil it begins to respire rapidly. Oxygen is taken up, just as in the respiration of animals, and carbon dioxide is given off.

The first work of the now active embryo is the production of enzymes. These are substances concerning the exact nature of which little is known except that they have the power of changing the nature of many other substances with which they come in contact without being seriously altered themselves. It is thus that the embryo of a seed produces an enzyme known as diastase, which has the power of changing starch into a sugar. The sugar being soluble is thus made available for the immediate use of the young plant. Growth now begins and the embryo rapidly enlarges. Soon the old seed coats are no longer able to contain the young plant. If it be a grain of corn, the plumule, wrapped in a sheath formed by the cotyledon and one or two miniature leaves, will burst out of the seed coat and grow upward. Already the radicle has appeared at the end of the grain and is forcing its way downward. The plant is not yet able to take food from the soil; all its growth must, therefore, be derived from the reserve supply of food stored within the seed itself. If now the plumule in its growth cannot reach the surface of the soil on account of hard clods, or a very firm crust caused by drying rapidly after a heavy rain, or because the reserve food is exhausted, the young plant will die. It is for this reason that well-developed seeds will make larger, stronger plants than the shriveled ones, and that large seeds, like corn or beans, may be planted deeper than small ones, like those of alfalfa or blue grass.

In many seeds like the bean and squash the process by which the plumule reaches the surface of the ground and the seed coat is cast off is quite different from the method described above for corn. In the case of corn the seed remains in its original position and the plumule grows upward and the radicle downward from it. On the other hand, when the squash germinates the radicle first comes out of the seed and grows downward. That part of the stem between the cotyledons and the root now begins to elongate rapidly. It, therefore, arches upward and pulls the cotyledons backward out of the seed coat. By the further elongation of the arched stem the cotyledons and the plumule are pulled up and out of the soil. After emerging from the surface the stem straightens up and the two cotyledons spread out, exposing their broad surfaces to the light and serving as the first leaves of the plant. Germination is now complete, and the plant is called a seedling.

By growth is meant increase in size. In order to understand growth we must first get some idea of the nature of the plant tissue. All plant bodies are made up of masses of cells. These may be spherical, long cylindrical with either square or pointed ends, or in the form of polyhedrons of various shapes and sizes. The walls are composed of cellulose alone or of this combined with various other substances in small quantities. Cotton may be taken as an example of a substance which is practically pure cellulose. The interior of a living plant cell is filled with protoplasm. This is a somewhat jelly-like substance, and is the really living part of the plant. It is within the protoplasm that the plant foods are digested and

made into living matter, and it is from the protoplasm also that the cell walls are built up. Now growth consists of increase in the size and the number of cells. The older cells divide by separating the protoplasm into two masses and forming a wall between them. The two new cells then grow until they reach the size of the parent cell, when they in turn divide, making four cells, and so on indefinitely as the plants grow upward, forming leaves, flowers and fruits.

In roots, growth in length is restricted to that part just back of the root tip. Should the root elongate throughout its entire length, the small lateral roots and root hairs would be torn off by being dragged through the soil. The end of the growing root is protected by a cap of hard cells, which the elongating part behind pushes through the soil without injury.

As the stem grows upward, buds and leaves are formed on the sides at somewhat swollen places known as nodes. When first formed these nodes are very close together, but by the growth in length of that part of the stem between the nodes they are carried further and further apart until the stem is mature. The growth of the stem is thus seen to differ from that of roots, in that the part which is growing in length is not restricted but may include several nodes, extending for a considerable distance along the stems of rapidly growing plants. When, however, a stem once matures, as when a perennial plant matures its twigs and branches in the fall of the year, that part of the twig never again increases in length. Subsequent growth proceeds from the terminal bud and carries the branch on beyond. The increase in thickness of stems and roots is carried on by the growth of the cells in the cambium layer. This is a layer of cells which lies just beneath the bark, and from it are formed the wood cells toward the interior and the bark cells toward the exterior. New layers are thus added around the stem each year, and since the spring growth of wood is somewhat softer than that formed in the latter part of the summer the individual layers may be distinguished, and in a cross-section of a stem or branch appear as rings. Since usually only one ring is formed in a year, they are called annual rings. The cambium layer is the only part of the stem capable of growing. Therefore in grafting or budding it is necessary to have the cambium layer of bud come in contact with that of the stock in order that they may unite. The cut edges of the wood in scion and stock never unite, but by the union of the two cambiums the grafted tree forms a strong and durable trunk.—Professor Freeman, of the Kansas Agricultural Experiment Station.

BIRD SEED BY WHOLESALE.

When the samplers of the William Dalrymple Company opened Soo Line Car 23348, in from Kensal, N. D., to Minneapolis, on October 30, and ran their long metal plungers in to test the grain, they got the surprise of their lives, said a Minneapolis correspondent. Wheat of every kind, corn, oats, barley, rye, flax and speltz had all passed through their plungers and into their sample bags in the course of long experience. But that which came out of car 23348 was unlike anything they had ever seen. For a minute they stared at it. Then one man began to twitter and the other broke into high-pitched silvery song, for the little golden specks that lay before them were nothing other than canary seed.

O. C. Austad, a prosperous farmer near Kensal, may not have known it, but he was making commercial history when he loaded Soo Car 23348, for neither the agricultural records of North Dakota nor the grain trade records of Minneapolis show that anything of the kind ever happened before.

At the Chamber of Commerce the smoking room statisticians got busy figuring out how many canary birds could eat, and for how long, out of a 60,000-pound capacity car loaded to three-fifths capacity, before it would give out.

One grain man said that, quality and all considered, it had a value of about \$2 a hundred pounds.

Leslie Edgerton, of the Albert Dickinson Co., the biggest seed outfit in the country, said he had never known canary seed to come in here from North Dakota. Some Iowa farmers have raised a little, but most of the canary birds eat the product of the Island of Sicily, which is of high quality, pays an import duty and has a value of \$4 to \$5 a hundred pounds.

NOXIOUS SEEDS.

The Agricultural Department has indicated a desire that the Treasury Department of the Government should issue an order directing the inspection of all imported cereals for the purpose of ascertaining whether they contain noxious seeds likely to do harm should they be introduced into the United States. The original claim of the Department was that imported screenings did contain such seeds in large quantities and the Treasury therefore finally undertook to have the imported screenings sampled and examined. This, it was supposed, ended the matter.

The later request that the inquiry be extended to wheat, corn, oats and other grains and that shipments of these grains be held up pending an investigation into their contents, will probably be resisted to the extreme by the Treasury as unnecessary, in the view of the Department. It is considered questionable whether the Department of Agriculture would have power under the law to take such action as is proposed, inasmuch as the seed in question will do no harm from the agricultural standpoint if the grain supposed to contain them is used for flouring purposes, while if it is to be used for seeding, the pure food law gives no authority for its detention and examination.

CANADIAN SEED FAIRS.

"A few facts about seed fairs," is the title of an attractive booklet issued by the seed grain branch of the Dominion Department of Agriculture at Regina. This little book shows that the seed fairs have increased from 7 in 1905 to 43 in 1907, and this year there will probably be one held by every one of the 62 agricultural societies in the province.

The seed fairs give the grower of good seed an opportunity to exhibit, to advertise and to sell his grain at very little cost to himself. By attending the seed fairs the man who realizes the need for and the value of good seed has an opportunity to see the best there is in his district. Farmers are given a chance to compare their grain with that of their neighbors and this naturally awakens and sustains interest and stimulates a healthy rivalry in the seed growing.

NOTES.

The Northern Seed Co., Bismarck, N. D., has increased its capital stock to \$25,000.

The Harns Seed Co., San Diego, Cal., has been purchased by P. M. Price, and will be operated by a corporation of which he is president. Mr. Price was originally with the Moline Plow Co.

A four-story brick building at 236-242 Johnson Street, Chicago, occupied as a warehouse by the Illinois Seed Co., collapsed on October 23, causing a loss on building, seeds and grains, of \$100,000. The structure recently had been filled with fifty carloads of seeds and the upper floor gave way.

Director Thatcher of the Washington Experiment Station at Pullman proposes that that state should offer a Grand Commonwealth Wheat Trophy at the National Corn Exposition, which is to be held in Omaha during December. Professor Thatcher has begun negotiations with prominent commercial bodies with the object of ascertaining if the wheat growing and other interests would offer the prize, which should be known this year and in years hereafter when competed for, as the "Washington Commonwealth Wheat Trophy."

ELEVATOR AND GRAIN NEWS

IOWA.

Bert Craven has disposed of his elevator at Hastings, Iowa, to Turner Bros.

Davis & Milligan report a rushing business at their new elevator at Scranton, Iowa.

The Pfund Lumber Co. of Jewell, Iowa, has purchased a Hall Signaling Grain Distributor.

The Farmers' Elevator Co. of Onawa, Iowa, has been incorporated under the laws of the state.

The Iowa Elevator Co. has recently installed a cleaner and new platforms in its house at Meservey, Iowa.

The Diamond Grain Co. of Des Moines, Iowa, is building an elevator at Reeve, Iowa, on the St. Paul & Des Moines Railroad.

Articles of incorporation have been filed at Des Moines by the Paullina Farmers' Grain and Supply Co. of Paullina, Iowa. The capital stock is \$30,000.

The Trans-Mississippi Elevator Co. is building a large addition to its plant at Battle Creek, Iowa, for the purpose of handling a large quantity of popcorn.

The Younglove Construction Co. of Sioux City, Iowa, recently placed an order for a line of elevator machinery with the Weller Manufacturing Co. of Chicago.

The Farmers' Elevator Co. of Farlin, Iowa, has filed articles of incorporation. The present officers of the company are: M. T. Condon, president, and E. A. Carnes, secretary.

The Elevator of the Cook Bros. Grain Co. at Marshalltown, Iowa, has been sold to Swisher & Co., who will take possession December 1. The consideration given is \$2,500 cash and eighty acres of land in Laramie County, Ohio.

The P. H. Pelkey Construction Co. of Wichita, Kan., has ordered a full line of elevator machinery from the Weller Manufacturing Co. of Chicago, Ill., to be installed in the new elevator of the Nebraska Hay and Grain Co. at Council Bluffs, Iowa. The installation of the machinery has commenced.

ILLINOIS.

B. S. Armstrong is rebuilding his elevator at Fox, Ill.

J. C. Ross is remodeling his elevator at Hayes, Ill.

A new cement foundation has been placed under the elevator at Crete, Ill.

The Towanda (Ill.) Grain Co. has increased its capital stock from \$12,000 to \$18,000.

Egley Bros. & Bush have installed a new grain dryer in their elevator at La Hogue, Ill.

Graham Bros. Co. succeed Bokhof & Graham Bros. in the grain business at Durand, Ill.

The B. P. Hill Grain Co. of Baileyville, Ill., has purchased a Hall Signaling Grain Distributor.

G. W. Ehrhart has sold his elevator at Allen-ville, Ill., to Edward Morris and J. B. Stone of Mattoon, Ill.

The Weller Manufacturing Co. of Chicago has supplied a large elevator outfit to A. Lucas & Sons, Peoria, Ill.

The Arcola Grain, Coal and Telephone Co. of Arcola, Ill., has increased its capital stock from \$8,000 to \$11,000.

Miller & Graves have completed their new elevator at Duncan, Ill., to replace the house burned a year ago.

Twist Bros., Rochester, Ill., recently ordered a line of elevator machinery from the Weller Manufacturing Co., Chicago.

George F. Barrett has leased the elevator at Tower Hill, Ill., and will run it in conjunction with his elevator at Pana, Ill.

Robert Worrell, C. R. Lowe and J. A. Neville have incorporated the Farmers' Elevator Co. of Norris, Ill., with a capital stock of \$5,000.

Kantz & Maus, Latham, Ill., have recently installed new grain elevator machinery, furnished by the Weller Manufacturing Co. of Chicago, in their plant.

The Burrell Engineering & Construction Co. has the contract for a 25,000-bushel elevator to be built at Risk, Ill., for the Strawn Farmers' Elevator Co.

The farmers' company at Mt. Auburn, Ill., which recently purchased the Turner & Osborn Elevators at that place and Osbornville, has been incorporated as the Mt. Auburn and Osbornville Grain Co. The capital is \$15,500 and the incor-

porators are C. L. Gaudy, Andrew Masters and Stephen R. Shepherd.

The Rogers Grain Co. of Chicago has purchased the north elevator at Panola, Ill., from the parties who recently acquired it through a sheriff's sale.

The New Holland (Ill.) Grain Co. has filed articles of incorporation with Jacob Velde, Wm. J. Chamblin and Wm. White as incorporators. The capital stock is \$10,000.

Dunlap & Ruddy have purchased the elevator at Blackstone, Ill., formerly owned by Merritt Bros. and will conduct it in connection with their other business at that point.

The Strawn Crossing Elevator Co. of St. Clair Township, Ill., has been incorporated by A. C. Foster, W. C. Bealmear and W. M. McCleary with a capital stock of \$8,000.

The elevator of the Farmer City Grain Co. at Farmer City, Ill., is undergoing extensive improvements. Among other things, a brick foundation is being placed under the house, with iron sheathing over all.

E. C. Sumner of Cutmer, Ill., has placed his contract with the Burrell Engineering & Construction Co. for a 15,000-bushel elevator. It will be equipped with Fairbanks Engine and Scale and Avery Automatic Scale.

W. F. Banta of Ridgefarm, Ill., the "grain king of Vermillion County," has disposed of his six elevators in that section to the National Elevator Co. of Indianapolis, Ind. The houses are located at Ridgefarm, Humrick, Mortimer, Woodyard, Silverwood and Silverwood Island. The consideration is private. Mr. Banta, who has been actively engaged in the grain business for over thirty years, was forced to quit by ill health. Harley J. Banta, the present manager, has been retained by the new owners.

MINNESOTA AND WISCONSIN.

A farmers' elevator company has been organized at Brewster, Minn.

William Bast has closed down his elevator at Elliott, Minn., for the season.

The Pacific Elevator Co. is building a flour and feed warehouse at Belview, Minn.

The Barnum Grain Co. of Minneapolis has increased its capital stock to \$300,000.

The Interstate Grain Co.'s Elevator at Wadena, Minn., has been opened for the season.

C. H. Shaver is building a large warehouse addition to his elevator at Carlton, Minn.

The Farmers' Elevator Co. is building a considerable addition to its plant at Utica, Minn.

The Peterson Produce Co. are planning the erection of an elevator at Embarrass, Wis.

The Farmers' Elevator Co. has purchased the Thomas Elevator at Stewartville, Minn.

The Branstad Milling Co. is building an elevator at Eau Claire, Wis. Kim Rosholt is in charge.

The Borgerding Elevator Co. is building an elevator at Elrosa, Minn. Ora Oraton has charge of the work.

A number of improvements have been recently made at the Western Elevator Co.'s house at Comfrey, Minn.

J. F. Thompson has instituted several important improvements in the elevator recently purchased by him at Viola, Minn.

The Red Lake Falls (Minn.) Milling Co. is planning to construct a line of elevators along the new Roseau extension of the Great Northern.

The Farmers' Grain and Mercantile Association of Hixton, Wis., has been incorporated with a capital stock of \$3,000 by Geo. D. Maule, E. G. Wallace and H. E. Burton.

M. Babcock has disposed of his grain elevator at Farmington, Minn., to the grain commission firm of Vaughn & Brackett of Minneapolis. The new owners are planning several improvements in the plant.

The Hunting Elevator Co. has purchased the grain business of the J. M. Larrabee Co. at Le Roy, Minn. The latter company has retained the elevator and other buildings, selling only the business itself.

The two elevators at Waseca, Minn., are being moved from their locations on the C. & N. W. right of way to sites on the grounds of the flouring mill at that place. A new steel elevator is also being added to the original equipment.

The new Farmers' Elevator Co. at Paynesville, Minn., has purchased the Atlantic Elevator at that place and installed Albert F. Kruger as agent. William Arndt has been elected president of the company and Geo. S. Bosworth secretary.

The mammoth new concrete elevator of the Terminal Elevator Co., situated on the C., M. & St. P. tracks, near Minnehaha station, Minneapolis, is now nearly completed. The Barnett &

Record Co. of Minneapolis are the contractors for the plant.

MISSOURI, KANSAS AND NEBRASKA.

A new elevator is being built at Bayard, Neb.

Albert Anderson is building an elevator at Larned, Kan.

Charles Bennett has reopened his elevator at Chanute, Kan.

C. Bishop has purchased the elevator of O. D. Althouse at Hardy, Neb.

The Farmers' Elevator at Tescott, Kan., is completed and handling grain.

J. C. Gillam is installing the machinery in his new elevator at Curryville, Mo.

The Peoples' Elevator Co. is building a large addition to its house at Rich Hill, Mo.

The McCaull-Webster Co. has removed their elevator at Fremont, Neb., to Maskell, Neb.

The Lexington (Neb.) Mill and Elevator Co. has ordered a Hall Signaling Grain Distributor.

The Corn Belt Grain Co. has rented premises at Atchison, Kan., and will establish a warehouse.

It is reported that the Ballou Elevator at Vestaburg, Mo., now operated by Crawford Bros., will be sold.

Harvey Reed has decided to build a 10,000-bushel elevator at Drexel, Mo., to replace the house recently burned.

The Trans-Mississippi Grain Co. will install a Hall Signaling Grain Distributor in their elevator at Meadow Grove, Neb.

J. K. Gise has sold his elevator at Beloit, Kan., to C. T. McCoy, who has taken possession and will conduct the business.

D. I. Bushnell & Co. have recently built a \$3,000 addition to their grain elevator at 711-15 South First Street, St. Louis, Mo.

The new elevator of the Crete Grain and Live Stock Association at Crete, Neb., was recently opened for business with Manager Holderman in charge.

P. D. Perll has purchased the elevator property of the Midland Elevator Co. at Marysville, Kan., and taken possession. The purchase price was \$6,275 cash.

The Skillin & Richards Manufacturing Co. of Chicago is furnishing the machines for W. H. Perrine's new 30,000-bushel grain elevator at Carrollton, Mo.

George Montgomery, Frank J. Kramer and Ada E. Kramer have incorporated the Kramer-Montgomery Grain Co. at St. Joseph, Mo., with a capital stock of \$5,000.

The Weller Manufacturing Co. of Chicago, Ill., has secured the contract for the elevating and conveying machinery for the elevator of the T. B. Hord Grain Co. at Columbus, Neb.

The Pickrell (Neb.) Farmers' Elevator Co. held its annual meeting last month and elected M. W. Terry president and John C. Meints secretary. J. D. White will manage the company's plant for another year.

The P. H. Pelkey Construction Co. of Wichita, Kan., has placed an order with the Weller Manufacturing Co. of Chicago for elevator machinery to be installed in the new plant of the Melvern Grain Co., Melvern, Kan.

SOUTHERN AND SOUTHWESTERN.

The Nixon Grocery Co. are planning to erect a grain elevator at Augusta, Ga.

Wade H. Warfield will rebuild his elevator recently burned at Sykesville, Md.

The Fouke Grain Co. of Texarkana, Ark., has changed its name to the Fouke Milling and Grain Co.

The Hyman Supply Co. of Newbern, N. C., recently ordered a large conveyor of the Weller Manufacturing Co., Chicago, Ill.

The New Orleans Terminal Co. has opened its 500,000-bushel elevator at Chalmette, La. The elevator was not used last year.

The Farmers' Elevator Co. of El Reno, Okla., has decided to enlarge its elevator at that point, as well as others in the country.

J. E. Dowdle, J. C. Carmack and J. J. Park have incorporated the Graham (Texas) Mill and Elevator Co. with \$40,000 capital stock.

The recently incorporated Holmes Grain and Feed Co. will erect a \$2,000 structure at Earle, Ark. The company is capitalized at \$6,000.

J. S. Kenneday, formerly of the firm of D. J. Kenneday & Co. of Franklin, Tenn., has embarked in the grain business for himself in that city.

The Merchants' Elevator at Nashville, Tenn., has received a state charter. The capitalization is \$50,000, and the directors are: L. W. McCord,

J. B. Horton, Allan J. Moore, W. E. Craig and R. I. Moore.

The Mathews-Black Grain Co. of Chickasha, Okla., has ordered a line of elevator machinery from the Weller Manufacturing Co. of Chicago, Ill.

The Wabash Elevator Co. of Uniontown, Ky., has been incorporated by H. C. Mason, Frederick Rathman and Thomas B. Young. The capital stock is \$16,000.

The Farmers' Storage and Warehouse Co. of Gracey, near Hopkinsville, Ky., has been incorporated. A warehouse for grain and other products will be erected.

The Merchants' Warehouse Co. of Jacksonville, Fla., has given out the following details concerning the elevator which will be erected: Structure, 95x400 feet; to be used for sacking bulk grain; capacity, 10 cars daily; construction of 450x95-foot terminals completed; total warehouse capacity, 300 cars; track capacity, 18 cars; ship-berth capacity, 900 linear feet; handle flour, grain and hay for jobbing trade; also import and export trade. James S. Easterby is manager of the plant.

OHIO, INDIANA AND MICHIGAN.

B. C. Godfrey will shortly commence the construction of a new elevator at Elkhart, Ind.

Bowden & Snider have installed a new automatic scale in their elevator at Mansfield, Ohio.

Martin Current has purchased the interest of Henry Ricketts in the elevator at Rileysburg, Ind.

Bartlett-Kuhn & Co. have adjusted the insurance on their elevator recently burned at Vincennes, Ind., and will rebuild in the near future.

The elevator of the Brafford Grain & Elevator Co., at Winamac, Ind., has been sold to Starr Bros. of the same place.

The power transmission machinery at the new Alliance Elevator at Hammond, Ind., has been furnished by the Weller Manufacturing Co. of Chicago, Ill.

Elliot & Beasley have purchased the grain elevator at Stony Ridge, Ohio, and will conduct it in connection with their flour and feed mill at Amesville, Ohio.

The Norfolk & Western Railroad has purchased the elevator of Quimby Climer, which stands near its right of way at Chillicothe, Ohio. The consideration was \$10,500.

The American Hominy Co. has placed the order with the Skillin & Richards Manufacturing Co. for the machinery equipment for its new \$30,000 steel elevator at Terre Haute, Ind.

The Wadsworth Feed Co. has commenced construction work on a 24,000-bushel elevator and feed mill at Warren, Ohio. The building will measure 42x76 feet and be three stories high.

The Reliance Construction Co. of Indianapolis, Ind., has placed the contract for the equipment of the new elevator at Summitville, Ind., with the Weller Manufacturing Co. of Chicago, Ill.

The Richmond Elevator Co. opened its new house at Hickey, Mich., on October 22, serving a free lunch to all present. President W. H. Acker and Manager J. A. Heath addressed the visitors.

The East Elevator of the Versailles Grain Co. at Versailles, Ohio, has been torn down and moved to Moffit, Ohio, where the owners will erect it again on a site recently acquired by them.

The new elevator of J. K. Hinkle & Co. at Rushville, Ind., built by the Reliance Construction Co. of Indianapolis, Ind., will be equipped with machinery from the Weller Manufacturing Co., Chicago.

Cargo, Owens & Marten of Bellevue, Mich., have placed a contract for elevator machinery with the Weller Construction Co. of Chicago, Ill. A Hall Signaling Grain Distributor will also be installed.

W. A. Dull has let the contract for his new elevator at Willshire, Ind., to the Burrell Engineering and Construction Co. of Chicago. The house will have a capacity of 17,000 bushels and is expected to be running by January 1.

During October the elevator of the Cleveland Grain Co. at Beech Grove, Ind., handled more grain than during any corresponding period since the elevator was erected. In oats alone 1,060 cars were handled.

The John Parent Co. have their new elevator in the Ohio side of Union City nearly ready to take in grain. The capacity is 30,000 bushels and it is equipped with everything modern in the way of machinery. They expect to tear down their old elevator.

J. P. Halstead has completed his new elevator at Kirkpatrick, Ind. The building is of cribbed construction, 20,000 bushels' capacity and equipped with U. S. Sheller and Beall Cleaner and automatic scales. Mr. Halstead was until recently a

partner in Halstead Bros. at this station and Brookston. Congratulations are in order, as he was married the other day.

D. A. Purviance has purchased the ground lease of Schulenberg Bros. & Weber at Huntington, Ind., and will build a new fireproof elevator in place of the one recently burned. Mr. Purviance has also acquired the property and leases of Schulenberg Bros. & Weber at Mardenis, Ind., which he will improve and enlarge.

THE DAKOTAS.

The new elevator at Taylor, N. D., has been finished.

Lahart Bros. are building an elevator at Bel-field, N. D.

A farmers' elevator is being built at Alcester, S. D.

The Farmers' Elevator at Wessington, S. D., has been completed.

Work has been started on the new elevator at Morristown, N. D.

The new Farmers' Elevator at Thomas, S. D., is completed and receiving grain.

The Reliance Elevator at Elm Springs, S. D., is being moved to Fairview, S. D.

The house of the Farmers' Elevator Co. at Lucca, N. D., is nearly completed.

Roland Magill has completed a 20,000-bushel elevator on his farm, near Verona, N. D.

A. L. Martin's new elevator at Chama, N. D., has been completed and put in commission.

Two elevators are in the course of construction at Benedict, N. D. Both are nearly completed.

Work will commence at once on the rebuilding of the Farmers' Elevator at Lehr, N. D., recently destroyed by fire.

Byron Stimpson has disposed of his elevator at Enderlin, N. D., and will remove to California to engage in mining.

Steele Bros. are building an elevator at a new siding on the Northwestern, between Westington and St. Lawrence, S. D.

The site of the Farmers' Elevator at Underwood, N. D., burned on August 26, is being cleared, preparatory to rebuilding.

The Farmers' Elevator Co. of Crystal, N. D., has finished its new houses at Mountain, Gardar and Concrete on the new North Dakota Railway.

Joseph Christopher has purchased a half interest in the C. W. Thompson's elevator business at Parker, S. D. The business also includes three subsidiary elevators in Iowa.

The South Dakota Grain Co. and W. C. Gemmill, whose elevators at Canton, S. D., were destroyed in the fire of October 2, will erect new houses on their old locations.

The Farmers' Elevator Co. at Heaton, N. D., has purchased the elevator of the Heaton Lumber Co. at that place and will take possession January 1. The consideration was \$7,000.

The Farmers' Elevator Co. have awarded the contract for their new 60,000-bushel house at Groton, S. D., to L. Buege of Minneapolis. The total cost of the plant is given at \$9,000.

The newly organized Farmers' Elevator Co. of Beresford, S. D., has purchased the elevator of J. W. Reedy at that place for a consideration of \$5,750. Possession is to be given on January 1.

EASTERN.

J. W. Bicknell & Son have engaged in the grain business at Canton, Me.

The Taunton Grain Co. has commenced work on its new elevator at Weir, Mass.

George Labonne, Jr., has installed a new gasoline engine in his elevator at Jewell City, Conn.

Crosby & Parker report fast work on their new elevator at Brattleboro, Vt. All cement work has been finished, as well as a large concrete dam and spillway. The capacity of the elevator will be larger than first reported.

The Hess Warming and Ventilating Co. of Chicago, Ill., has commenced the installation of a number of Hess Driers for the Iron Elevator and Transfer Co. at Buffalo, N. Y. The drier will have a capacity of 30,000 bushels per day and is expected to be running by Christmas.

Claude H. Laffin has purchased the grain elevator and stock of Charles F. Rice, at Brookfield, Mass. Mr. Rice has been engaged in the grain business at Brookfield for over forty years, during the last twenty of which Mr. Laffin has assisted him. Recent injuries hastened Mr. Rice's retirement.

Reports from Boston state that progress on the new 1,000,000-bushel B. & A. Elevator at East Boston, to replace the one burned some time ago, is slow. A temporary conveyor and transfer elevator has been installed, however, and the

transference of grain from track to ship is proceeding without interruption. No grain is being placed in storage, however. Four large piers 780x-250 feet are now under construction.

CANADIAN.

The Farmers' Elevator at Macleod, Alta., has been finished.

The Central Grain Co., Ltd., of Winnipeg, Man., has incorporated.

F. H. Steele has opened a mill and elevator at Bradwardine, Man.

The Security Elevator Co. is building an elevator at Rivers, Man.

The Ogilvie Flour Mills Co. has erected an elevator at Justice, Man.

The Alberta Grain Co. is building a 40,000-bushel elevator at Stettler, Alberta.

A. McMichael is planning the erection of a 25,000-bushel elevator at Beatty, Sask.

The Saskatchewan Elevator Co. is planning the erection of an elevator at Rosthern, Sask.

Articles of incorporation have been filed by the Mowbray Farmers' Elevator Co., Mowbray, Man.

The Canadian Elevator Co. and the Winnipeg Elevator Co. will build elevators at Elstow, Sask.

The citizens of Vermillion, Alta., have subscribed the capital to build an elevator at that place.

The assets of the Farmers' Union Elevator Co. of Gretna, Man., are advertised for sale by tender.

Bull & Meridith, elevator proprietors, Yorkton, Sask., have been succeeded by the Bull & Snell Co., Ltd.

The Saskatchewan Elevator Co. and the British-American Elevator Co. are each building a 30,000-bushel elevator at Laird, Sask.

The Imperial Elevator Co. is erecting an elevator at Tugaskie, Sask. The Hall Elevator at that point has been put in operation.

Elevators A, B and C of the C. P. R. at Fort William, Ont., have been thoroughly overhauled and improved for this season's work.

Work on the new grain conveyors installed by the Montreal Harbor Commissioners was finished on October 16 and they are now in full operation.

The Farmers' Elevator & Trading Co. of Estevan, Sask., have demolished their old warehouse at that point and are building a new elevator in its place.

Receipts at Port Arthur, Ont., to date are 9,000,000 bushels of grain, and the shipments are 6,000,000 bushels. Last year the total receipts were 10,000,000 bushels, and with a month to go before the close of navigation this year's record will largely exceed last.

The Scottish Co-Operative Wholesale Society of Glasgow, which recently sent a deputation to visit the wheat regions of Canada, has let the contract for six elevators to be built along the line of the Grand Trunk Pacific in Manitoba. These will be erected at once, with others further west, to follow probably next year.

Godwin, Murray, Barnhart, Ltd., has been incorporated with a capital of \$18,000, and office at Montreal, with power, among other things, to deal in grain, flour, etc., and to lease, erect and operate the necessary mills, elevators and machinery. The provisional directors are: C. B. Godwin, E. D. Murray, A. C. Barnhart, W. O. H. Dodds and H. Mackay.

The Canadian Pacific Railway are putting a floating elevator in commission at St. John, N. B. A short time ago the Common Council of St. John refused the proposition; since then, however, at the instance of Commissioner Pugsley, the railroad has taken up the proposition and a floating elevator has been started from Montreal for St. John.

The Montreal Corn Exchange Association Committee on the Harbor Commissioners' recent letter respecting elevator facilities at that port has reported in favor of the provision of an additional marine leg to the Commissioners' elevator before the opening of navigation in 1909, the construction of another elevator, and the desirability of fitting the present one to meet the requirements of the local trade as far as possible.

A new company, to be known as the Thunder Bay Elevator Co., has been organized at Winnipeg, Man. The men behind the company are: W. McWilliams, of the Canadian Elevator Co.; C. B. Piper and N. Bawlf, who are interested in the Empire Elevator Co. The new company has already made arrangements to erect a 1,500,000-bushel elevator at Port Arthur, Ont. A site has been selected just north of the Canadian Northern docks, and the company has asked exemption from taxation for a term of years. If the rate payers grant this exemption work on the new plant will be commenced at once and continue

throughout the winter in order to be ready in ample time for next season's crop. The cost of the elevator will be in the neighborhood of \$500,000.

C. C. Castle, Canadian warehouse commissioner, Winnipeg, has issued an official list of all those taking out track grain buyers' licenses up to the end of September. The list comprises 106 names and is good for the current grain season, September 1, 1908, to August 31, 1909.

Consul Harry A. Conant of Windsor, Canada, reports the establishment of a new concern at Walkerville, Ontario, which is buying up the grain elevators in Essex and Kent counties. It will divert much of the grain, especially corn, rye and barley, to its distillery and malt house.

WESTERN.

The new warehouse of the Hawkeye Elevator Co. at Roberts, Mont., is about completed.

Miller Bros. are contemplating the erection of a large grain elevator at Sugar City, Utah.

The Valley Elevator at Bainville, Mont., has been completed and J. L. Durkin placed in charge.

The Imperial Elevator, the last of the four elevators at Culbertson, Mont., has been completed and opened for business.

The Farmers' Protective Association is operating its new 100,000-bushel elevator at Kalispell, Mont., and reports good business in that section.

It is reported that the McCall-Dinsmore Co. will supplement their chain of elevators in Montana with a house at some point in the Ruby valley.

The new \$12,000 elevator of the Utah-Idaho Elevator Co. at Filer, Idaho, has been completed. John Parker, formerly of Campbell, Neb., will manage the plant.

OBITUARY

Sewall Sleuman, a wealthy grain dealer of Omaha, committed suicide on October 17.

John I. Berge, formerly engaged in the grain business at Frost, Minn., died of consumption on October 9, at his farm near Hastings, Minn. Mr. Berge was well known and highly respected in the county. He leaves a wife and four children.

Charles H. Beers died on October 13 at Geneva, Ill., at the age of 77 years. Mr. Beers had been a member of the Chicago Board of Trade since 1859. Of late years his firm was Beers & Hanson. Mr. Beers was born at Sharon, Conn., on August 10, 1831, and came to Chicago in 1857. One daughter survives him.

Benjamin F. Griggs, a member of the Boston Chamber of Commerce, and identified with the grain and hay business in Boston since 1860, died at his home in Roxbury, Mass., on November 2, after a brief illness. Mr. Griggs was seventy-seven years old, and a veteran gold miner of '49. Two children survive.

Edward J. Madden, connected with Armour & Co. for over thirty years and a member of the Chicago Board of Trade, died suddenly at his desk on the morning of October 31. Mr. Madden was one of the most popular men in the Armour employ and enjoyed the personal confidence of Philip D. Armour, and later that of J. Ogden Armour. A widow and four children survive.

Robert R. Ives, a resident of Red Wing, Minn., for fifty-two years, died on October 3, at his home in that city. Mr. Ives was born in New York state in 1832, coming to Red Wing in 1857. For many years he conducted a grist mill and elevator in that town. In 1880 he disposed of his mill property and operated a line of elevators in the western part of the state until 1889. Since then he had led a retired life. He leaves a sister and one son.

John Miller, ex-governor of North Dakota, died of heart failure at his home, 429 East Second Street, Duluth, Minn., on October 26. Mr. Miller had been confined to his home for about three weeks, and his death was not unexpected, although it came quite suddenly, as a result of heart failure. Mr. Miller was born at Dresden, N. Y., on October 29, 1843. He was engaged in business at that point until 1880, when he came west, moving to Dakota, where he became interested in wheat raising on a large scale. In 1889 he was elected first governor of the new state of North Dakota, and became famous through his fight against permitting the Louisiana lottery in his state. He refused re-election, and in 1896 moved to Duluth, where he has resided ever since. On coming to Duluth he engaged in the grain commission business and was president of the John Miller Co. at the time of his death. Mr. Miller always took a keen interest in public matters and served the city well in all he undertook. He leaves a wife and one daughter.

THE EXCHANGES

Philip H. Dorsey, John M. De Lashmuth, Jr., Harry C. Gorsuch and Albert H. Gosnell have been posted for membership on the Baltimore Chamber of Commerce.

Francis Bowman has resigned as assistant secretary of the Buffalo Chamber of Commerce to become advertising manager for the Carborundum Co. of Niagara Falls, N. Y.

Seventy-five members have been added to the Chicago Board of Trade Mutual Benefit Association since E. G. Heeman has been appointed chairman of the recruiting committee of the Association.

The directors of the New Orleans Board of Trade have admitted Miss Lily Deeves to membership. Miss Deeves, who has succeeded her father, the late W. H. Deeves, in business, is agent for a number of winter wheat mills.

H. B. Slaughter, John A. O'Reilly and Harry D. Richeson have been admitted to membership of the Chicago Board of Trade. H. A. Borchardt, E. J. Newell and the estate of M. J. Buxbaum have posted membership for withdrawal and transfer.

The directors have decided that all sales of grain on the Minneapolis Chamber of Commerce are subject to state weights, unless definitely agreed upon to the contrary and unless stipulated in confirmation of the trade. Failure to furnish state weights when required will be deemed uncommercial conduct.

Out of respect to the memory of ex-Governor John Miller, the Duluth Board of Trade closed at noon on November 3, the day of the funeral. Six business associates of Mr. Miller were pallbearers, D. A. Willard, F. A. Hubbs, C. W. Peterson, E. H. Mirick, R. W. Chaffee and Walter Thexton. The body was taken to Dryden, N. Y., for burial.

The Merchants' Exchange of Portland, Ore., begins this month the thirtieth year of its existence. The event is marked by the moving into newer and more modern quarters in the Board of Trade Building at Fourth and Oak Streets. Manager E. W. Wright of the Exchange has signed a five-year lease for the new quarters.

A special ballot was recently taken on the New York Produce Exchange over amendments to the gratuity rules. About one thousand ballots were cast, with the vote about three to one in favor of the amendments, which provided for new non-participating memberships with dues fixed at \$100. Quite a demand for the new memberships has already arisen.

Members of the Chicago Board of Trade voted down two proposed amendments to the rules on November 6. The first proposed a change in the cash trade rules to charge ½ cent a bushel for "forwarding grain;" it was defeated by a vote of 407 to 188. The second amendment, to give the directors more power in regulating the clearing house, was defeated by a vote of 492 to 105.

A conference is in session at Kansas City relative to elevation charges on grain. The Interstate Commerce Commission has ruled that the railroads must discontinue such allowances and the Kansas City conference is in the nature of a protest against this ruling. Representatives from the boards of trade of Chicago, Kansas City, Peoria, St. Joseph and Omaha are attending the meeting.

Work on the new Grain Exchange Building at Sioux City, Iowa, is being pushed rapidly. As fast as a set of offices is completed, it is occupied by the firm which leased it. The grain firms in the building will be: M. T. Shepherdson Co., Lamson Bros., Interstate Grain Co., McCaull-Dinsmore Co., Central Grain Co., J. J. Mullaney, W. V. Harrington Grain Co., Sioux City Board of Trade and Chas. Siman, chief grain inspector.

The Minneapolis Chamber of Commerce has finally determined to have a regular oats pit. The move has long been contemplated and discussed without any definite result until recently. The actual carpenter work is now being done and the pit will be put in commission in a few days. Minneapolis has grown wonderfully in the last few years as an oats market. Prior to 1895 only 3,000,000 to 4,000,000 bushels of oats arrived in Minneapolis in a year. Since that time the business has grown steadily until today the annual receipts are nearly 25,000,000 bushels.

The Milwaukee Chamber of Commerce has adopted the following amendment regarding velvet chaff wheat: No. 1 velvet chaff wheat shall be bright, sound and well cleaned and composed of velvet chaff wheat; No. 2 velvet chaff wheat shall be sound, dry, reasonably clean and be slightly bleached or shrunken, but not good enough for No. 1; No. 3 velvet chaff wheat shall include all wheat of that variety that is bleached, smutty

or for any other cause unfit for No. 2; No. 4 velvet chaff wheat shall include all wheat of that variety that is very smutty, badly bleached, badly grown, or for any other cause unfit for No. 3.

ON THE MATTER OF INTEREST ON DRAFTS.

A meeting was held in the office of George F. Stone, secretary of the Chicago Board of Trade, on Wednesday, November 4, by the committees appointed during the summer to discuss the question of charging interest on drafts drawn against grain sold on shipper's track, and also on consigned grain; also on the question of the penalty between No. 3 and contract corn on the Chicago Exchange.

The committees were composed of Frank M. Bunch (chairman), Edward Andrews and James Bradley, representing the Chicago Board of Trade; while the Illinois Grain Dealers' Association was represented by E. M. Wayne, president; B. P. Hill of Freeport, George A. DeLong of Foolsland, Fred Rapp of San Jose, and S. W. Strong, secretary. The Indiana Grain Dealers' Association was represented by Mr. M. T. Dillen, secretary.

The questions were discussed at the annual conventions of the state associations during the past summer and resolutions were passed denying the legal and moral right of the exchange members to charge interest on drafts drawn on grain sold on shipper's tracks, for the reason that the shipper there made delivery and parted with his legal right to the grain. The associations also took issue with the exchange on the matter of interest charged on drafts drawn on grain consigned, to the extent that they asked that there be a time fixed when interest should cease. About two hours' time was consumed by the committees at the meeting, and each member had a full and open opportunity to be heard.

The Board of Trade committee will report to the board of directors of the exchange at an early day.

ARGENTINE GRAIN PRODUCTION.

Consul-General Alban G. Snyder, of Buenos Aires, has sent to the State Department the information that the Argentine Government has just issued its report of the last harvest of wheat, linseed and oats, and of exports up to June 30 last, which, together with additional data up to July 31, shows the following figures:

Crop.	Production crop year to July 31, 1908.	Exports crop year to July 31, 1908.	Exports same period last year.
	Tons.	Tons.	Tons.
Wheat	5,263,705	3,136,840	2,701,753
Linseed	1,100,700	864,456	778,905
Oats	492,770	383,117	147,360
a Including flour.			

It is estimated that 1,300,000 tons of wheat and 100,000 tons of linseed are needed for consumption, while nearly the whole production of oats is exported, therefore the quantities of wheat and linseed available for export are estimated at 4,000,000 and 1,000,000 tons, respectively, leaving still to be exported this year 800,000 tons of wheat, 150,000 tons of linseed, and 100,000 tons of oats.

The present price of these grains is higher than last year, so that the comparison of this year's harvest with that of last year is favorable to the agricultural industry, while the future harvest promises still better results, the weather being so far (August 29) all that can be asked for and the area under cultivation having been considerably increased.

The report shows the following distribution of the production of grain among the provinces and territories:

Province.	Wheat. Tons.	Linseed. Tons.	Oats. Tons.
Buenos Aires	2,505,321	324,306	467,319
Santa Fe	1,019,708	504,734	7,067
Cordoba	1,183,409	110,448	2,500
Entre Rios	247,796	151,410	9,800
Pampa Central	207,471	7,012	4,283
Other provinces and territories	75,000	2,800	1,800

The cultivation of oats has made remarkable progress, the total production in 1906 having been only 53,137 tons.

The areas of land sown in grain for the last harvest, with the amount of increase over the previous year, were as follows, in hectares (hectare = 2.47 acres):

Crop.	Hectares.	Increase.
Wheat	5,759,987	67,700
Linseed	1,391,467	370,000
Oats	264,098	200,000

The average production per hectare was 995 kilos (kilo = 2.2 pounds) of wheat, nearly 800 kilos of linseed, and 1,735 kilos of oats.

The first car of new shelled corn from the West reached Baltimore on October 27. It was from Ohio, and was in the "pink of condition."

COMMISSION

The Moore Grain Co. of Kansas City, Mo., has been incorporated with a capital stock of \$10,000. The incorporators are B. C. Moore, J. E. Seaver and E. H. Seaver.

The American Stock and Grain Co. of Jefferson City, Mo., has been incorporated with a capital stock of \$50,000. The incorporators are John W. Conelius, Claude E. Ricketts and E. T. Guinau.

Horace Wing, who was salesman in the wheat pit about three years ago for Pringle, Fitch & Co. of Chicago, has resumed his old position. Earl O'Neill, who has occupied the position, has retired for a needed rest.

The Churchill Grain and Seed Co. of Buffalo, N. Y., is making extensive changes and additions to its plant, putting in a new drier, Peterson Oats Purifier, new elevator legs, etc., furnished by the Skillin & Richards Mfg. Co.

The Central Grain Co. of Winnipeg, Man., has been organized to carry on a general grain business, with capital stock of \$199,000. The directors are E. E. Hall, Donald Morrison, Charles J. McFall, Charles S. Blanchard and Stewart Murray.

Articles of incorporation have been filed by the Kramer-Montgomery Grain Co. of St. Joseph, Mo. The company will carry on a general grain commission business. Capital stock is \$5,000, and the incorporators are George Montgomery, Ada E. Kramer and Frank J. Kramer.

It is reported that the Harrington Grain Co. and the W. V. Harrington Grain Co., both of Sioux Falls, S. D., will remove their offices to Sioux City, Iowa. The companies own a string of elevators in South Dakota, and it is stated that offices at Sioux City would facilitate the handling of their business.

Henry D. Wetmore, of H. D. Wetmore & Co., grain merchants, Chicago, started on an extensive trip abroad November 11, to be absent until next April. He goes first to Panama, where he will see the workings of canal construction, thence to Argentina and Brazil, where he will take steamer for London. After a short trip through Europe he will return home.

The firm of White & White of Wheeling, W. Va., recently made an assignment. The firm has been doing a grain and stock brokerage business. The assets are given at \$225,000, with liabilities much less in amount. It was stated that the cause of the assignment was inability to meet certain liabilities which, it was feared, would jeopardize real estate owned by the firm and cause it to be sacrificed. In order to save this the assignment was made for the protection of all creditors as well as for their own protection.

Charles Rouzer and C. D. Sullivan announce the organization of a partnership under the firm name of Rouzer-Sullivan Co. for the conduct of a brokerage business, handling grain, hay and feed, at Nashville, Tenn. Mr. Rouzer has been identified with the grain interests of Nashville for a number of years, as secretary and treasurer of the Nashville Warehouse & Elevator Co., and latterly as the manager of the Hermitage Elevator and Warehouse, while Mr. Sullivan, who has enjoyed a prosperous business at Birmingham, Ala., believing Nashville offers a greater field, has removed to that market. They are members of the Nashville Grain Exchange and the National Hay Association.

W. H. Harroun of St. Joseph, Mo., who was prominently before the grain trade some years ago in reference to irregularities in bills of lading and warehouse receipts handled by various Western banking institutions as collateral for loans made the various Harroun grain companies, which were very large in extent at the time, and whose liabilities at the time of his failure were reported as being over \$1,000,000, has, we understand, through the fortunate outcome of investments made prior to his failure, been recently placed in position whereby everyone of his creditors will receive payment in full with interest, and it is said that after his debts are paid he will be left with a very comfortable fortune.

Frank J. Delaney has engaged in the grain business in Chicago on joint account with J. C. Shaffer & Co., with offices in room 75 Counselman Building. Mr. Delaney was recently manager of the Nash-Ferguson Grain Co. at Kansas City, Mo., and later was vice-president and manager of the Elwood Grain Co.'s business at St. Joseph, Mo. The latter operated the 500,000-bushel terminal elevator on the St. Joseph & Grand Island Railroad. Mr. Delaney, through his experience in the hard-wheat territory and Missouri River district, felt that there was an opening in Chicago for a commission house specializing largely on hard wheat. In this connection he will handle J. C. Shaffer & Co.'s milling wheat trade and

will also act as agent for Eastern millers in their purchases of carlots on the Chicago Board of Trade.

L. J. Schwabacher & Co. have embarked in the commission business in grain, provisions and cotton at Chicago, with offices at 411 Postal Telegraph Building. The firm is composed of L. J. Schwabacher and his father, Morris Schwabacher, of the North American Provision Co.

ADULTERATING RUSSIAN GRAIN.

A special report of Dornbusch's of October 19 states that, notwithstanding the many measures adopted by the South Russian corn exchanges for combating the adulteration of grain products, this evil practice goes on unchecked, and owing to the dearth of cereals and the enhanced competition it has obtained of late unprecedented dimensions. All the endeavors of firms of high standing to put a stop to it have also remained ineffective. Inasmuch as all the rules for regulating the corn trade introduced by the exchanges have not produced the desired results, but, on the contrary, in proportion as they were introduced the adulteration of cereals assumed larger proportions, there must be something in the very conditions of the Russian grain trade that stimulates this practice.

As a matter of fact, continues the report foreign prices have lately shaped themselves more in favor of dirty than clean cereals, not only for feeding, but for breadstuffs. For instance, if clean, heavy ulka is valued in Germany at 1.40 marks per pood (33½ cents per 36 pounds), then the article with 15 per cent of dirt and weighing 20 pounds less ought to realize 20 per cent less; whereas, in fact, the price paid for this material is only 15 per cent less. Such a disparity of values also exists in England. This is due to the introduction of improved means for cleaning grain and to the vegetable admixtures having a considerable value on the consuming markets, as feeding stuff for cattle and fowls and even for some technical purposes. The adulteration of barley has especially received a great impetus since the new custom house schedule was introduced there, providing a duty of 1.30 marks (30.9 cents) for feeding and 4 marks (95.2 cents) for brewing barley per double centner. To elude the higher duty German buyers demand sellers to bring down the Russian clean heavy barley to the lower standard.

Since the last Berlin conference, when the provisions of the German-Netherlands contract were altered (with a view to meet the views of foreign buyers), the struggle against adulteration was revived with new vigor. The South Russian exchanges, and notably those of Odessa and Nickolaef, issued circulars threatening penalties for non-compliance with the provisions of the contract, and they have promulgated rules fixing their stringency. All these measures had no effect on regulating the South Russian grain trade. Attempts at abolishing adulteration were made some years back with the same success as it has been obtained in recent times.

NATIONAL CORN SHOW.

The National Corn Exposition, to be held in Omaha on December 9-19, desires the co-operation of all grain dealers; and in view of the fact that the Exposition management has broadened its scope to offer prizes for oats and other grains, as well as corn, the trade will certainly find it well worth their attention, as one of the forces tending to urge and help the farmer toward larger and better grain crops.

Oats will be the special subject this year on "Grain Dealers' Day," December 15, when the program will include, among others, the following features:

Prof. M. L. Bowman, Farm Crops Department, Iowa State College of Agriculture, will deliver an illustrated lecture upon "The Improvement of the Oat Crop."

Mr. J. C. Murray, grain department, Quaker Oats Company, Chicago, will deliver an address on "The Relative Value of Good and Poor Oats to the Cereal Miller."

The program and discussion will be conducted under the auspices of the Western Grain Dealers' Association, assisted by the Illinois Grain Dealers' Association, Indiana Grain Dealers' Association, Kansas Grain Dealers' Association, Ohio Grain Dealers' Association, Oklahoma Grain Dealers' Association, Tri-State Grain Dealers' Association, Texas Grain Dealers' Association, Farmers' Cooperative Association, and "Do something for oats and do it now" will be the slogan.

President G. W. Watles, Secretary E. J. McVann and Chief Inspector G. B. Powell of the Omaha Grain Exchange will serve as hosts to the visiting grain dealers.

COURT DECISIONS

[Prepared especially for the "American Elevator and Grain Trade" by J. L. Rosenberger, LL.B., of the Chicago Bar.]

Part of Payment for Grain Made to Wrong Party.

An elevator company, which bought grain from a land owner in actual possession of the grain, under forfeiture on a crop mortgage, paid part of the purchase price to a third party claiming under a chattel mortgage which was expressly subject to a landlord's first lien, but which had been in fact recorded before the landlord's. The Supreme Court of Minnesota holds (*Gaertner vs. Western Elevator Co.*, 116 Northwestern Reporter, 945) that in view of the fact of the actual knowledge of such third party as to the land owner's rights, of the recitals in the mortgage having reference thereto, and of the land owner's possession of the grain at the time of the sale, the land owner was entitled to recover in conversion the amount so paid the third party. As one dealing with real estate has notice of the claims of its occupant, so one dealing with personal property has notice of the rights the person in actual, as distinguished from constructive, possession may have, and is subject to the duty of making all reasonable inquiries as to the state of the vendor's title.

Right of Purchaser of Matured Crops to Enter Upon Leased Premises to Harvest Same.

One who has purchased from a tenant matured crops still standing in fields on the leased premises, the Supreme Court of Nebraska holds, *Kirkpatrick vs. Fonner*, 116 Northwestern Reporter, 779, has a right, during the term of the lease, to enter and harvest the crop in the usual and customary manner. A provision in the lease against subletting does not affect the right of the purchaser to enter upon the leased premises for the purpose of harvesting the crops. At the same time the court holds that the plaintiff in this case was not entitled to an injunction against the defendant to prevent the latter from interfering with him in the harvesting of matured crops, which he had purchased from the defendant's tenant, and which were grown upon the defendant's premises, where the only acts of interference shown on the part of the defendant consisted in ordering the plaintiff not to come upon the premises, and in ordering him to remove therefrom after he had entered, and in fastening up certain gates, which did not have the effect of preventing the plaintiff from harvesting the crops.

Liability of Railroad Companies for Unlawful Discrimination in Furnishing Cars for Grain.

The Appellate Court of Indiana says, on the appeal of *Pittsburg, Cincinnati, Chicago & St. Louis Railway Co. vs. Wood and others* (84 Northwestern Reporter, 1009), that the latter parties sued the railway company to recover damages for failure to furnish cars for shipment of corn from their elevators. It was averred that the defendant company was a common carrier of grain; that the plaintiffs tendered grain for shipment and demanded "suitable cars" therefor; that the defendant held itself out to be a common carrier to certain cities, naming them, among which number was Baltimore, and that the plaintiffs "tendered grain for shipment to the markets aforesaid." The first objection urged was that the complaint did not allege the class of cars demanded. But the court thinks that there could be no uncertainty on the part of the defendant as to the class of cars wanted by the plaintiffs. When the kind of freight and the destination were made known and demand made for "suitable cars," the plaintiffs had particularized the class as far as they were lawfully required to do. The power to designate the specific cars to be used for these shipments lay entirely with the defendant and it could not be heard to say that a more exact classification by the plaintiffs was necessary.

On the question of discrimination there was evidence to show that the plaintiffs were engaged in the same kind of business as those shippers who were located at points where the defendant had competition, and who were preferred in the assignments of cars. The plaintiffs' places of business were in close proximity to such competitive points, and the business was conducted in the same manner as that of the alleged preferred shippers. Furthermore, the plaintiffs had only one route for shipping their grain, i. e., by the defendant's line. They constantly applied for cars during the time of the alleged discrimination. There was sufficient similarity of conditions shown to justify the admission of evidence to prove the number of cars supplied shippers at competitive points. Since the allegation that the plaintiffs were ready,

willing and able to pay the freight charges was material, evidence to that effect was admissible.

The cars requested were for shipments of corn to Baltimore. The measure of damages for delay in the shipment of goods intended for sale is the difference in price between the time when the goods should have reasonably arrived at the point of destination and the time when they actually arrived, less the transportation charges. But the shipper is under a duty to so handle the goods as to reduce the damages as much as possible. He is entitled to have considered in estimating his damages the necessary expense to which he was put in thus reducing the damages. If, then, the shipper, in pursuance of his duty to reduce the damages as much as possible, ships the corn to other points and there sells it, the measure of damages would be that applied in this case, i. e., the difference between the value of the corn at Baltimore when it should have arrived there and the actual selling price at the point where the grain was disposed of, with the proper adjustment of the difference in the cost of transportation. The time when the corn was sold was a reasonable time when, if cars had been furnished, it should have been placed on the Baltimore market.

An instruction requested by the plaintiffs told the jury that, if the defendant's lines extended to Pittsburg, and it maintained traffic arrangements with lines connecting thereat extending to Baltimore and Newport News so as to have through transportation, and if the defendant during said time held itself out as a through carrier to Baltimore and Newport News, it would be liable for all damages resulting proximately from a failure to carry goods offered in accordance with such representations. In other words, the instruction said that if as between the defendant and other lines connecting at Pittsburg there was a traffic arrangement whereby the defendant could have grain received on its own lines transported to said cities without change, and if as between the defendant and those offering goods for shipment the defendant represented and held itself out to be a through carrier to said points of destination, then the defendant would be liable for all damages arising proximately from a failure to carry the goods in accordance with such representations. This was a fair statement of the law as applicable to the facts in this case.

PIT-GROWN WHEAT.

An experiment in wheat growing, of great originality and much promise, is being made in Russia. Some very astounding results are said to have already been secured, and Russian experimenters believe not only that the yield will be immensely increased, but that certain corn crops may be made perennial, says the London Miller.

The experiment consists solely in the manner of cultivation. The author of the new method is General Levitsky, who began his experiments last August in a little model farm adjoining his barracks. His plan is simple. He sows single grains of wheat at the bottom of conical pits a foot to a foot and a half deep. As the grain, thus sown in the apex of the pit, begins to appear above the surface it is earthed over, and each time the leaf appears more earth is filled in till after, say, five or six earthings the pit is full and level with the surface.

The result of this treatment is that the plant, which has a "branching knot" at the base of the original stem and of each new stem, sends out a number of new shoots at each earthing. It is asserted in a letter to the Novoe Vremya that one grain treated in this way sent up 19,683 shoots. The straw seems to be unusually stout, the yield enormous, and General Levitsky believes that the plant will be perennial.

Apart from this, General Levitsky has done enough to show that the small farmer, at any rate, may benefit enormously by getting the wheat to tiller out in this way instead of preventing this natural process by close sowing; and it is worth notice that Prince Kropotkin, the pioneer of intensive cultivation in England, years ago prophesied that the present methods of growing wheat would be given up; and he published photographs of wheat plants showing many 100 stems from a single grain.

The total surplus of freight cars in the United States and Canada was reduced to 110,912, according to the report of the car efficiency committee of the American Railway Association, which was issued on November 7 for the fortnight ended November 5. This is a reduction of only 4,124 since the last report. The shop cars, or those in bad order, however, show a decrease of 14,000, making a net improvement of about 18,000 cars.

IN THE COURTS

An attempt was made recently by the bankrupt Parker Grain Co. of McPherson, Kan., to settle with creditors on a basis of 20 cents on the dollar. The liabilities of the firm amounted to \$160,000, with assets less than one-third of that amount. The matter has been referred to Judge John C. Pollock of Topeka, Kan.

The Woodworth Elevator Co. of Minneapolis has begun an action in the district court at Fergus Falls, Minn., against F. A. Theis and the Northland Elevator Co., claiming to have been the owner of 1,175 bushels of wheat in the elevator at Parkers' Prairie, which the defendants wrongfully took possession of.

Alleging that the O. R. & N. Co. did not furnish the proper cars for the transportation of grain, the firm of Kerr, Gifford & Co. has brought suit in the Circuit Court at Portland, Ore., to recover \$1,762. It is charged that between September, 1905, and May, 1907, grain shipped from points in Oregon to Portland and Chicago was damaged in transit.

The Schreiner Grain Co. of St. Louis has started suit in the Court of Common Pleas at Chillicothe, Ohio, against Jas. P. Craiu, constable, and the Standard Cereal Co. to recover possession of a carload of corn which was involved in a suit some time ago. The plaintiff claims that the defendants wrongfully detained the corn in their possession.

Civilla M. Reed, administratrix of her husband's estate, is suing the Iron Elevator and Transfer Co. at Buffalo, N. Y., for damages to the amount of \$20,000 for the death of her husband, who was in the employ of the company. The plaintiff alleges that Reed was sent into a bin to start the grain running, became overcome by fumes arising from the grain, and was buried in the bin.

The Kansas Supreme Court has returned the case of the Farmers' Co-operative Shipping Association against C. B. Hoffman of Enterprise, Kan., to the lower court with instructions to enter judgment for \$2,262.49. The case has been hanging fire for nearly two years, and grew out of the sale, in the fall of 1903, of two carloads of wheat to a Kansas City firm by Hoffman, while acting as manager for the Association. The Kansas City firm was insolvent, and Hoffman has now been held responsible for the loss incurred by the sale.

The Odell Farmers' Elevator Co., Odell, Neb., has been sued at Beatrice, Neb., for \$962.92 damages, by T. H. Bunch of Little Rock, Ark. The plaintiff states that the defendant in May of this year delivered 8,000 bushels of corn on a contract for 10,000 bushels and then refused to deliver the balance, although granted a time extension of a month on account of heavy rains and washouts. In order to make delivery the plaintiff was thereby forced to buy the 2,000 bushels in open market at an advanced price, and he now asks judgment for damages sustained.

The position of Kansas City as a grain market is involved in a suit filed in the United States Circuit Court in that city on October 21. Frank Hagerman, as attorney for the complainants, asks court review of the decision rendered by the Interstate Commerce Commission in the Peavey elevator cases. For the service of transferring grain the elevator formerly charged a fee. The Interstate Commerce Commission abolished the practice, and by its decision threatened to seriously cripple the grain business of Kansas City and other Missouri River towns.

The Hays-Eames Elevator Co. has instituted suit in the county court at Lincoln, Neb., against the Union Pacific Railroad to recover \$221.25 damages for failure of the defendant to fulfill a verbal contract to lease an elevator site on its right of way to the plaintiff. The railroad had agreed to lease a site at Sidney, Neb., to the elevator company, and the company, upon assurances from the railroad, proceeded to ship materials and workmen to that point without a formal contract. The railroad then refused to carry out the agreement. The plaintiff asks simply for the actual expenditures made preparatory to building at Sidney.

The Brook-Rauch Mill and Elevator Co. of Little Rock, Ark., has appealed to the Federal Court, in a suit against the Iron Mountain Railway, asking \$55,000 damages for alleged discrimination in favor of T. H. Bunch and the T. H. Bunch Co. This is the second suit of its kind between the parties. The plaintiff alleges the railroad granted a mill-in-transit rate to the Bunch company, and to T. H. Bunch before the formation of the company, allowing a rebate of one and one-quarter cents for all grain so handled, which was not allowed to the plaintiff, thus forcing it to suffer a loss of \$1,250, besides a damage of \$3,500 in Kansas City,

where the rate was not effective. Six other items of loss are also enumerated, bringing the total sued for up to \$55,000.

Attorneys for Smith D. Ray of Iola, Kan., have filed a complaint against the Santa Fe Railroad before the State Board of Railroad Commissioners at Topeka, Kan., complaining of an overcharge on a car of wheat shipped over the Santa Fe to the Bower Grain Co., in Kansas City. According to the petition, Mr. Ray asked for a grain car from the Santa Fe to ship wheat to Kansas City, and the railroad company gave him an Erie implement or furniture car with a capacity of eighty thousand pounds. Mr. Ray loaded the car with all the wheat he had, fifty thousand pounds, which is for all average cars a load. The rate from Iola to Kansas City is 10 cents per hundred. The railroad made Mr. Ray pay, so the petition states, for the capacity of the car, eighty thousand pounds, which is an overcharge on grains per average carload weight. The average grain weight per car runs from forty to sixty thousand pounds with a loading limit above that of 10 per cent. This is but another way, so Mr. Ray claims, of increasing the freight rates and it is to be determined whether such a deal will stand. Mr. Ray says he bought this wheat on a basis of 10 cents per hundred, freight, but that the road, by giving him an implement car, increased the weight 25,000 pounds, thereby increasing the freight rate from 10 cents a hundred to 15 cents and even as high as 17 cents per hundred. By reason of this, he was loser on the car of wheat.

SECRETARY WILSON FOR THE LAW?

A Washington telegram of November 2 to the Minneapolis Journal says:

"The recent agreement between grain men at their meeting in St. Louis with reference to uniform inspection of grain has not changed the attitude of that part of the national administration which has its home in the Department of Agriculture toward a federal inspection law. In his last annual message President Roosevelt indorsed the movement for such a law and Secretary Wilson has been urging its adoption for several years. It was thought that the agreement between the grain men might cause the department to abate its advocacy of a federal statute, but this is not the case.

"It is said that the department will not go further than it already has gone, but will rest with the indorsement given the proposed law, the passage of which will be welcomed. It is pointed out that whatever agreement has been made among the grain men has the sanction only of commercial organizations operating locally and does not reach what is claimed to be the nub of the whole question; that is, inspection that will cover grain entering into interstate commerce in all sections of the country.

"State and other local inspection affects only a limited territory in each instance, the department believes, and the real remedy for complaints lies in the passage of a federal inspection law."

IMPROVING WASHINGTON WHEAT.

Hybridization of wheat, with which cereal experts at Washington State College at Pullman, in the heart of the grain belt of Whitman County, have just closed a series of successful experiments, is expected to add \$1,800,000 to \$2,000,000 a year to the value of the production of the state in the future.

Prof. C. W. Lawrence, station cerealist, and Prof. George Severance, now acting head of the Agricultural Department of the College, took charge of the detail work of propagating, perfecting and testing the new wheats four years ago. Last year it was fairly certain that the investigators had been successful, but considerable caution was exercised in the matter of making known what had been done, the preference being to await for the results of another year of trial before definitely announcing the success of the hybrids. Seed of the hybrid wheats was sent to farmers in various parts of the state, the final reports from which have been received during the last few weeks. The testimony which is offered by the farmers who have grown and harvested the hybrid wheats shows that the newly created varieties of wheat can be depended upon to yield at least 10 per cent and in many cases 25 per cent better than the standard varieties.

John Dower, superintendent of St. Louis Merchants' Exchange, Department of Weights, reports the following number of cars arriving in that market in a leaky condition: Leaking at grain doors, 343; over grain door, 31; at boxes, 650; end windows, 100; not sealed, 248; windows not sealed, 96; windows open, 56; total, 1,468.

HAY AND STRAW

Hay is moving rapidly in Michigan.

Hatch Bros. have installed a new alfalfa grinder in their plant at Fowler, Kan.

The new Albion Alfalfa Meal Mills at Albion, Neb., have commenced grinding.

Manager Chapin reports excellent business at the alfalfa mill at Minneapolis, Kan.

It is reported that an alfalfa mill will be erected on the site of the burned elevator of Walters & Hoyt at Abilene, Kan.

D. A. Baird's hay warehouse at Bonham, Texas, was destroyed by fire on October 31. The loss was \$4,000, with \$3,000 insurance.

The building of the Beloit Alfalfa Mill Co. at Beloit, Kan., is nearly completed and machinery for the plant has begun to arrive.

The Harney Bros. Hay Co. has been incorporated, with a capital stock of \$5,000, to carry on a hay commission business at Chicago.

The big hay warehouse of the J. P. Williams Co. at Pensacola, Fla., was burned on October 27. The loss was about \$5,000 on the building and its contents.

From New York state comes the report that the farmers are holding on to their hay tenaciously, waiting for a rise in the city market prices, which are at present very low.

S. C. Brooks of Wichita, Kan., who recently invented a new alfalfa mill, has contracted with the Brooks Tire Machine Co. of that city to manufacture the mills for him.

George E. Burgess, Roland B. Roe and Alice E. Burgess have incorporated the Clark-Douglas Co. at Rochester, N. Y., to deal in hay and grain. The capital stock is \$10,000.

The Otto Weiss Alfalfa Stock Food Co. is spending about \$4,000 on improvements in the plant at Wichita, Kan. A warehouse addition is being built and a new 150-horsepower engine installed.

Governor Warner of Michigan recently sent a telegraphic order to the Richmond Elevator Co., Richmond, Mich., for a trainload of hay and straw to be sent to the forest-fire sufferers in northern Michigan.

One hundred tons of baled hay were recently burned at Toppenish, Wash. They were stacked on the edge of the town and caught fire in some unknown manner. The hay was owned by L. Spencer and was uninsured.

Harry C. Jones has withdrawn from the firm of C. Bosley Littig & Co. of Baltimore, Md., and will hereafter conduct a hay commission business at 507 and 509 Chamber of Commerce, Baltimore. The style of the new firm will be H. C. Jones & Co.

From Minnesota comes the report that the farmers of that state are planning to largely increase their acreage of alfalfa for the coming year. Since 1900 the annual production of alfalfa in Minnesota has gone forward by leaps and bounds.

President F. M. Sapp of the new Hutchinson Alfalfa Products Co. states that the company will be grinding at Hutchinson, Kan., by November 20. The capacity of the plant at the start will be about twenty tons every ten hours. A big stock of alfalfa hay is already on hand.

The new Pioneer Alfalfa Mill Co. of Wichita, Kan., has purchased three acres of ground in the vicinity of the Red Star Mill in that city and the architect's plans for a new alfalfa mill have been completed. The plans call for a four-story brick structure, and construction work will be started in the near future.

L. W. Zimmerman of Minneapolis was recently at North Yakima, Wash., discussing plans for the building of an alfalfa cutting plant to cost \$25,000. The company back of the project desires to secure alfalfa land and will manufacture a cattle feed of mixed cut alfalfa and corn. The proposed plant is to have a capacity of twenty tons a day.

J. R. Kenworthy and W. S. Schopf have closed a deal for twenty-nine lots at Wichita, Kan., on which they will erect a big alfalfa mill. The lots were bought in three separate purchases. The combined consideration will amount to \$16,500. The stock company which Messrs. Kenworthy and Schopf were promoting, as noted in these columns in August, is now practically complete.

A NEW ALFALFA.

The Bureau of Plant Industry of the Department of Agriculture has been presented by a firm in Chile with seed of a Peruvian strain of alfalfa. Experiments made of the resulting crops have led to the conclusion that the strain is sufficiently different from all other alfalfas to constitute a

distinct botanical variety. It was found that this variety grows more rapidly, makes quicker recovery after cutting, begins growth earlier in spring and continues growth later in autumn than common alfalfa. This results in one or two additional cuttings each year and also in a greater yield from each cutting due to its vigorous growth. It has been found that Peruvian alfalfa can be grown to greatest advantage only under irrigation and in the Southwest where the climate is mild in winter.—Hay Trade Journal.

CURING HAY IN NORWAY.

A recent consular report gives the Norwegian method of curing hay as follows: "In Norway hay is largely cured by hanging it on wooden racks. Strong stakes, say six feet long, are driven into the ground eight or ten feet apart. To these are wired or lashed with strong twine four poles, one above the other, and about one foot apart. The cut grass is hung up on these racks, much on the same plan a washerwoman hangs her clothes on a line to dry. The racks are moved about from one field to another as the work progresses, and when haying is finished are stored away for use another year. They claim that the use of the system prevents the rotting of any of the hay if wet weather prevails after cutting, and that a smaller percentage of the hay is exposed to weather than in the cocking manner of handling it."

WICHITA THE HOME OF ALFALFA MILLING.

Alfalfa milling may still be an infant industry, but it has proved to be a remarkably precocious youngster. The birth of the industry took place only four years ago, and Wichita, Kan., claims the distinction of being the place where the auspicious event occurred. Alfalfa meal originated, we are told, as a result of experiments on a new poultry food. Alfalfa hay was ground into chicken feed and so well did the fowls thrive on it that it was tried on larger stock and found successful.

At this time Wichita had but one little alfalfa mill, turning out one to four tons daily, used mostly as a poultry food. With the success of alfalfa as a general stock food the mill was enlarged and other plants sprang up. This was four years ago. To-day Wichita has six large alfalfa meal mills running, with a combined capacity of something like 500 tons daily.

Otto Weiss, owner of one of the largest alfalfa mills in Wichita, and a pioneer in the business, is enthusiastic over the prospects of alfalfa. He believes its future to be absolutely unlimited. To-day, as Mr. Weiss points out, alfalfa stock food from Wichita is sold in over 100 of the largest cities in twenty different states. At that, the East is just beginning to know alfalfa stock food and when that section of the country begins to appreciate and understand it the present output of the western mills will rapidly increase. Certainly alfalfa meal can feel proud of its record.

KANSAS AND HER ALFALFA.

BY SEC'Y COBURN.

Kansas is unique in many things, but in none more than in the commanding position she occupies in relation to alfalfa growing. Her development in this industry has been one of the marvels of her prolific agriculture, and with alfalfa, as with winter wheat, no other state is her equal in its area and production. The alfalfa field of Kansas now approximates nearly three-quarters of a million acres, and but three cultivated crops exceed it in annual area, viz: Wheat, corn and oats. In combination with these alfalfa furnishes Kansans in abundance with perhaps the best and cheapest rations anywhere available for the maintenance of their live stock, for the excellence of which they are famed.

The credulity of the stranger to alfalfa, however fair minded, is invariably taxed by a recitation of the truth about this wonderful plant; even the facts cut in two leave him in a perturbed state of doubt as to the veracity of the narrator, but thoroughly convincing are the experiences of those who are actually its growers. It is a perennial blessing to those who are so fortunate as to have an area devoted to its culture; yielding annually, whether the season be wet or dry, its several cuttings of hay, unsurpassed in tonnage and quality, it is indeed esteemed as a benefaction and doubly appreciated in those portions where it flourishes but where the clovers do not prosper. Another feature, too, that the wideawake farmer does not overlook or minimize, is the improving effects of its roots, restoring and enriching rather than depleting the fertility of the soil in which they grow, to the great benefit of other succeeding crops. As is well known, alfalfa is one of the oldest of forage plants, but to the husbandry of the American farmer it is of but recent acquisi-

tion. Kansans were among the foremost to correctly estimate its worth, and its widespread introduction in the Sunflower State has been one of the most important factors in increasing bank deposits and the per capita wealth.

In Kansas alfalfa growing was a prelude to prosperity, and is the steadfast promoter of her progress. From comparative obscurity it has steadily risen to the foremost rank of the hay plants, and has already resulted in quadrupling the state's output of tame hay. In 1890, the value of the tame hay crop was two million dollars, while that of 1905 was worth over 10½ million dollars. The annual value of products of live stock in that time has been practically doubled, and alfalfa has made of Kansas, if not first, one of the foremost states in dairying—a most desirable branch of husbandry that intelligently and generally followed well-nigh insures continued and enlarged prosperity. Alfalfa, it seems, supplied the one requisite Providence failed to provide in establishing the otherwise ready-made conditions for dairying in Kansas, and the attention being given this mode of intensive farming in nearly every locality is having its beneficial influence, commercially and socially.

As a hay there is none so good for all kinds of live stock as alfalfa, and for horses and hogs it is a most invaluable food either as a hay, a soiling crop, or as pasture. As a meat-maker, milk-maker and money-maker it is equally prized, and as a renovator and improver of soils it has no competitor.

HAY AT PITTSBURG.

The best criterion on the hay market at any time is the number of cars in the yards, left over and the billings of cars in transit. The total number of these three factors at this point for the last three weeks has averaged, when recapitulated twice each week, 150 cars. This is the normal number best suited for the steady requirements of this market.

The consumption of hay in Pittsburg for the four months ending September 30 averaged about twenty-five cars per day during that period, while the receipts per day during the following eight months ending May 31 average about four cars per day. From these general figures it will be seen that if, at this time of the year, our billings, arrivals and holdovers exceed 150 cars for the grand total, we are due for excessive receipts and dull market. This will argue that the present outlook is for a steady to normal market at present and perhaps for the whole of November.

While it is true we have enough hay in sight for all purposes, we are of necessity shy of No. 1 Timothy, for the receipts are mostly of No. 2 Timothy, liners and a free distribution of clover-mixed hay. The shipment of No. 1 Timothy at this time is therefore advised, for prices on this good grade of hay will be steady to firmer; not firm enough to predict a marked advance, but a strong enough market to take care of any and all shipments of No. 1 Timothy.

There is no special activity to be noted for any other grade. Farmers are still free sellers of Clover Mixed and plain No. 2 Timothy, cars are easy, and the terminal markets generally are fairly well supplied. Added to this there is no increased consumption at receiving points, and notwithstanding reports to the contrary, farmers are not feeding much hay. Rough feed is not at all scarce. Good, fine Prairie hay can be handled to advantage.—Hay and Grain Reporter, November 10.

M. S. Mead, formerly agent of the E. & W. Transportation Co., Anchor Line, at Milwaukee, has been appointed agent of the Anchor Line at Erie, Pa., taking effect April 1, 1908, succeeding C. W. Payne, deceased. Mr. Mead's address will be Anchor Line Dock, Erie, Pa.

H. A. Juneau, chief weighmaster at Superior, reports that of the cars of grain handled by the Wisconsin Grain and Warehouse Commission at that market in October, 4,832 arrived in leaky condition, as follows: Leaking at grain door, 3,479; at ends, 1,760; at sides, 807; at corners, 445; at drawbars, 240; at bottom, 72. The following report is made of new work noted on cars arriving, whether done before or after grain was loaded, to be determined between shipper and railroad company: Cars reported "newly nailed," "patched" or "cleated," 1,162; cars with leaks stuffed with "rags," "waste," "paper" or "grass," 44; cars showing depression in grain line, 13; reported in "bad order" on end or sides, 21; reported as having been loads from "wrecked cars," 2; evidence of having been repaired en route, 4; cars with no side doors, 53; no end doors, 4; with side door nailed, 10. Seal Record—Cars no end seals, 1,038; no side seals, 503; broken seals, 117; cars end door open, 155; cars side doors open, 113.

CROP REPORTS

The Kansas corn crop is late. Forage crops are all reported good. The Kaffir corn crop is said to be enormous.

Advices from various sections of Indiana show that the corn crop in that state will be larger than at first expected.

The Michigan November crop report indicated the condition of wheat to be 74, against 86 a year ago, with a five-year average of 84. The corn yield was estimated at 30 bushels per acre.

Recent heavy rains in southern Oregon and northern California have led to heavy plantings of wheat by the farmers in those sections. Much new land will also be cleared and seeded for the first time.

The total winter wheat acreage is estimated at 27,000,000, as against 31,000,000 sown last fall, with prospects poor. Texas and Oklahoma show an increase in acreage, with a reduction nearly everywhere else.

Brown-Tracy of Minneapolis wired that well-posted receivers estimated that 70 per cent of the oats crop had been marketed and that farmers would need most of those they had left. Country elevator stocks are light.

Broomball cables that Argentine reports favorable weather, with an exportable surplus estimated at 104,000,000 bushels. Cold weather in France and Germany are retarding their crops. In Russia there have been some complaints about the condition of corn.

The Ohio State Report gives the wheat condition in that state only 56, as against 82 a year ago, when it improved to 94 in June. The area sown is only 76 per cent of last fall, or 1,446,000 acres. The corn crop compared with an average is estimated at 83, as against 73 a year ago. The rye condition is given as 62, against 85 a year ago.

The final report of Secretary George Wells of the Iowa Grain Dealers' Association placed the estimate of the Iowa corn crop at 287,000,000 bushels, being a gain of 7,000,000 bushels during September and an increase of 15 per cent over last year. The report claims that 10 per cent of the yield will be soft. Good weather in the early part of October largely increased the preliminary estimates.

Secretary Prouty of the Oklahoma Grain Dealers' Association says of corn: "In my opinion, we have more than ever before in the history of Oklahoma. We will yield this year anywhere from 130,000,000 to 150,000,000 bushels. Regarding the fall sowing of wheat, I have no hesitancy in saying the acreage, as compared with last year, will be decreased at least 25 per cent, but with favorable conditions this decreased acreage will be utilized very largely for corn next spring. Condition of growing plant is ideal, as we have never suffered from lack of moisture since the grain has been planted."

B. W. Snow recently stated that the December report will likely be the lowest in many years. He said further: "The serious part of the situation in the drouth sections is not so much the question of acreage, because seeding is still being rushed and can be continued for some time, but the sickly growth of the plants. This will tell on the harvest, especially if the winter is severe. The drouth has been the severest in twenty-five years. The soil has never been worked down to make a good seed bed. This has made the ground cloddy, exposed the roots and prevented growth. The area of greatest severity is east of the Mississippi River, but the effect will be spread over the entire belt in varying degree."

The Bureau of Statistics of the United States Department of Agriculture has made preliminary estimates of the production of the principal crops of the United States, a summary of which, with comparisons, is as follows:

Crop.	Production (000 omitted).		Quality.	
	1908.	1907.	1908.	1907.
Corn	2,642,687	2,592,320	86.9	82.8
Winter wheat	425,940	409,442	90.1	90.5
Spring wheat	234,080	224,645	88.2	88.8
Total wheat	660,020	634,087	89.4	89.9
Oats	789,161	754,443	81.3	77.0
Barley	167,482	153,597	89.3	88.2
Rye	30,921	31,566	92.7	91.6
Buckwheat	15,648	14,290	90.7	87.3
Flaxseed	25,717	25,851	91.4	89.7
Rice (rough)	22,718	18,738	88.4	...
Potatoes	274,660	297,942	87.6	88.3
Hay, tons	67,743	63,677	94.5	90.5
Tobacco, lbs.	629,634	698,126	87.9	90.0

The above crops, which represent approximately 70 per cent of the value of all farm crops,

are this year in the aggregate about 3 per cent greater than in 1907, and 2.4 per cent greater than the average of the preceding five years. The average weight of oats per measured bushel was in 1908, 29.8 pounds; in 1907, 29.4 pounds; 1906, 32 pounds.

The Manitoba Grain Dealers' Association estimates the wheat crop of Manitoba, Saskatchewan, and Alberta at 99,311,840 bushels, against 74,000,000 last year. This year's crop has been distributed as follows:

	Bushels.
Wheat inspected up to November 1.....	25,453,000
Wheat in transit, not inspected.....	1,400,000
Wheat in country stores.....	14,160,000
Wheat in country mills.....	8,000,000
Reserves for food and seed.....	12,000,000
Surplus in farmers' hands.....	38,298,840

Total 99,311,840
Of this crop 22 per cent was No. 4 grade or lower.

The Crop Reporting Board of the Department of Agriculture reported on November 9 from Washington, giving the average yield per acre of corn at 26.2 bushels, as against 25.9 bushels last year and a ten-year average of 25.6. This would indicate a total production of 2,642,687,000 bushels, compared with 2,592,320,000 bushels last year. The quality is given as 86.9, as compared with 82.8 a year ago, and 84.3 for a ten-year average. Comparisons for important corn states follow:

States.	Yield per acre,		Total production		Quality,	
	1908.	1907.	1908.	1907.	1908.	1907.
Illinois	31.6	29.6	294,860	342,756	90	86
Iowa	31.7	28.7	287,456	270,220	87	78
Missouri	27.0	20.3	203,634	241,025	80	88
Nebraska	27.0	20.5	205,767	179,328	88	84
Indiana	30.3	13.7	137,835	168,840	90	82
Texas	25.7	20.1	201,848	155,589	87	82
Kansas	22.0	15.2	152,900	155,142	83	83
Ohio	38.5	13.0	130,900	117,640	93	78
Oklahoma	24.8	12.2	122,239	113,265	81	80
Kentucky	25.2	8.4	84,823	93,060	84	88
Tennessee	24.8	7.4	74,747	78,364	88	88
Georgia	12.5	5.6	56,438	57,538	89	92
Michigan	31.8	6.0	60,420	57,190	90	74
South Dakota	29.7	5.7	57,677	47,175	91	81
Wisconsin	33.7	4.9	49,674	46,688	84	76
Virginia	26.0	4.8	48,828	46,025	89	90
Pennsylvania	39.5	5.5	55,814	45,922	91	75
Alabama	14.7	4.4	44,835	45,896	88	86
North Carolina	18.0	5.0	50,166	45,078	86	90
Minnesota	29.0	4.6	46,835	43,605	83	70
Arkansas	20.2	5.2	52,540	43,430	82	71
All others	21.8	2.2	22,451	198,544	88	83
United States	26.2	26.2	2,642,687	2,592,320	86.9	82.8

[Circular 17, B. S., Dept. of Agr.]

GOVERNMENT CROP REPORTS: VALUE, SCOPE AND PREPARATION.

BY CHAS. C. CLARK,
Associate Statistician.

Prices of agricultural products are primarily governed by the law of supply and demand; therefore early information concerning the supply is of value to all. Those who produce and those who consume are vitally interested, as well as the dealer who stands between them. The mutual relations and interests of agriculture, industry, commerce and labor demand that there should be published at brief intervals during the crop season reliable information on the condition, acreage, production and value of the principal crops, by states and agricultural areas.

Foreign countries depend to a large and increasing extent upon the United States for agricultural products. To meet the market demands at home and abroad is the mission of American agriculture. The manufacturer, the merchant, the mechanic, the skilled operative in the factory, in fact, all who consume the products of American agriculture, whether at home or abroad, are interested in the monthly Government reports of conditions on the farms of the United States.

As commerce consists largely in an exchange of the products of agriculture and manufacture among their respective producers, commerce thrives as the farmer and the factory operator prosper. Some individuals, however, do not always regard the common welfare, and injurious commercial speculations occur when ignorance prevails concerning the condition of our crops and the true relations of supply and demand. At such times the farmer often does not obtain just prices, while the consumer derives no benefit and business is injuriously affected. The con-

sequences of false reports concerning the condition and prospective yield of the cotton crop alone may be very damaging. If there were no adequate Government crop-reporting service, and by misleading reports speculators should depress the price a single cent per pound, growers would lose \$60,000,000 or more; if prices were improperly increased, manufacturers and allied interests would be affected to a proportionate degree.

The Government crop reports are especially valuable to farmers, who are benefited by them both directly and indirectly. Those farmers who read the reports and thus keep informed as to condition and prospects of crops profit in a direct way, while all are indirectly benefited through this knowledge being imparted to the great body of progressive and intelligent farmers and dealers instead of remaining the exclusive possession of a few persons.

It is well known that speculators and large dealers in farm products do not depend entirely upon Government reports for information concerning crop conditions. They have traveling agents and correspondents (usually local buyers) throughout the United States, who keep them posted upon local conditions, and the large buyer or speculator in return gives to these local buyers or correspondents information in regard to general conditions. Local buyers know the conditions of crops in their vicinity better, as a rule, than the average farmer, because it is their business to keep well informed. The farmer cannot, by refusing to report for his locality the condition of crops, prevent buyers or speculators from knowing the condition of the crop. But without the Government crop reports, which are made up largely by and for him, the farmer could not be sure of receiving any equivalent information from a disinterested source. He may know very well the condition of crops in his own locality, but must depend upon reports of others, in the newspapers or elsewhere, for the conditions of the entire crop. Prices in his home market are influenced, as a rule, more by the condition of the whole crop than by local conditions. The entire wheat crop of his county may be destroyed and prices be low, if the entire crop is large, or his county may have a "bumper" crop and prices be very high, if the entire crop is short.

Some private crop reports published in newspapers are honestly prepared and more or less reliable; on the other hand, misleading crop reports are frequently sent throughout the country to affect prices in the interest of speculators. The average farmer does not know which reports are reliable and which are sent out to mislead. The Government reports enable farmers to keep themselves informed as to the general conditions, while the wide publicity given them checks and limits the evils of false reports sent out by persons interested in forcing the prices of products to figures not justified by actual conditions.

The more certainty there is as to the supply of and demand for a crop the less hazard or speculation there is in the business of distributing the crop, to the benefit, in the long run, of both producer and consumer.

Large manufacturing firms and agricultural implement or hardware companies, who neither buy nor sell farm products, are much interested in the prospects and conditions of crops. This knowledge enables them to distribute their wares more economically by sending large consignments to sections where crops are good and farmers have the power to buy, and less to sections of crop shortage where there is obviously less demand. Few farmers realize how much is saved by the even distribution of wares which they buy from a knowledge of crop prospects. By this saving, farmers in the long run are benefited.

It is important to railroad companies to know the probable size of crops in the country in order to provide sufficient cars. The more nearly they can learn the size of the crops the better able are they to move them economically and promptly. Here again, in the long run, farmers are indirectly benefited by the cheaper distribution of the crop, due to better information of crop conditions.

Under modern trade regulations and conditions, prompt and reliable information regarding agricultural areas, prospects and yields is also an important factor in the proper conduct of commercial, industrial and transportation enterprises. The earlier the information regarding the probable production of the great agricultural commodities can be made public, the more safely can the business of the country be managed from year to year.

Retail dealers in all lines of goods, whether in city or country, order from wholesale merchants, jobbers or manufacturers the goods they expect to sell many weeks, frequently months,

before actual purchase and shipment. Jobbers follow the same course, and manufacturers produce the goods and wares handled by merchants of every class far ahead of their actual distribution and consumption.

For example, retail shoe dealers place their orders in summer for shoes to be sold during the fall, winter, or following spring months. Wholesale shoe dealers and jobbers, similarly, order from manufacturers the particular qualities and styles of shoes indicated by the orders of the retail dealers in such quantities as the orders show to be necessary. The manufacturers, constantly receiving these orders, adjust, as closely as they can, their purchases of material, employment of operatives, and quantity of output so as to enable them to supply the quantity of shoes which have been or are likely to be ordered, their aim being, on the one hand, to meet fully and promptly the requirements of trade (in other words, the demand of the purchasing public) and, on the other hand, to avoid such over-production as will result in a large surplus unsalable except at a loss.

The same ideas and rules prevail throughout every branch of trade, commerce and transportation, the shoe business being simply an example of other lines of business in the matter of "doing things in advance."

Now, it is universally conceded that farming—agriculture—is the basic industry upon which all other industries greatly depend. The measure of the country's crops is to a large extent the measure of the country's prosperity, and the purchasing power of the people is increased or diminished as the crops are bountiful or meager. Therefore the commercial interests of the country are vitally affected by the quantity and quality of the crops; and it becomes a matter of vast importance to them to know "in advance" what the crop prospects are during the growing season and what the output is at harvest.

With such information carefully and scientifically gathered and compiled, and honestly disseminated, so that it can be depended upon as being as reliable as any forecast or estimate can possibly be, and relied upon as emanating from an impartial and disinterested source, the merchants and manufacturers of the country can certainly act with a degree of prudence and intelligence not possible were the information lacking.

If reports show, during the growing season, that the condition of wheat is such as to indicate a full crop on a large area, the merchants of the wheat-producing sections of the country know that they can give liberal orders for goods to be handled by them several weeks or months later; the manufacturers, located far from the wheat fields, know where there will be a large demand for such of their products as are used by all dependent upon the wheat industry; the railroad companies know they will have heavy freights to transport; and so the advance knowledge regarding the probable future outcome of the crop serves as a guide to every branch of commerce and trade connected with the wheat-growing areas of the country. The same is true as to the other crops—corn, cotton, oats, rye, tobacco, etc.

If, on the other hand, the condition of growing crops is unfavorable reliable information to that effect is equally, in fact more, important to trade and commerce than when the promise is good. For, when conditions are unfavorable, the merchants, manufacturers and transporters must move with a degree of caution not necessary when the prospects are highly encouraging.

It was to remedy the evils and to subserve and protect the interests of all, as above noted, that Congress provided for issuing monthly crop reports, and the crop-reporting service of the Department of Agriculture aims to supply the public at large with impartial, unbiased information regarding crop areas, conditions and yields which, it must be apparent, is highly essential and beneficial not only to farmers, but also, equally, to our commercial interests of every kind and class.

ORIGIN OF THE CROP-REPORTING SERVICE.

The first enactment authorizing the collection of agricultural statistics by the Department of Agriculture was the act, passed May 15, 1862, establishing the Department, "the general design and duties of which shall be to acquire and to diffuse among the people of the United States information on subjects connected with agriculture, in the most general and comprehensive sense of that word." The Commissioner was required by this act to "procure and preserve all information concerning agriculture which he can obtain by means of books, correspondence, and by practical and scientific experiments, accurate records of which experiments shall be kept in his office, by the collection of

statistics, and by any other appropriate means within his power."

The first appropriation for collecting agricultural statistics by the Department was provided for by the act of February 25, 1863, which was made in bulk for the work of the Department, amounting in all to \$90,000. The then Commissioner of Agriculture allotted a part of this amount for collecting agricultural statistics, and appointed a statistician for that purpose. For the fiscal year ended June 30, 1865, the first distinct and separate provision was made for collecting agricultural statistics for information and reports, and the amount of \$20,000 was appropriated.

From an allotment of a few thousand dollars each year at first the crop-reporting service has been evolved, perfected and enlarged into the Bureau of Statistics of this Department.

The appropriation act for the Department of Agriculture for the fiscal year ended June 30, 1908, carried appropriations of about \$220,000 for the Bureau of Statistics, and for the current year the appropriation has been increased to about \$222,000. As the appropriations for the statistical and crop-reporting service have been gradually increased during the past several years, the field service and organization of the Bureau have been correspondingly enlarged.

METHODS OF CROP REPORTING.

The Bureau of Statistics issues each month detailed reports relating to agricultural conditions throughout the United States, the data upon which they are based being obtained through a special field service, a corps of state statistical agents and a large body of voluntary correspondents composed of the following classes: County correspondents, township correspondents, individual farmers and special cotton correspondents.

The special field service consists of seventeen traveling agents, each assigned to report for a separate group of states. These agents are especially qualified by statistical training and practical knowledge of crops. They systematically travel over the district assigned to them, carefully note the development of each crop, keep in touch with best informed opinion and render written and telegraphic reports monthly and at such other times as required.

There are forty-five state statistical agents, each located in a different state. Each reports for his state as a whole, and maintains a corps of correspondents entirely independent of those reporting directly to the Department at Washington. These state statistical correspondents report each month directly to the state agent on schedules furnished him. The reports are then tabulated and weighted according to the relative product or area of the given crop in each county represented, and are summarized by the state agent, who co-ordinates and analyzes them in the light of his personal knowledge of conditions, and from them prepares his reports to the Department.

There are approximately 2,800 counties of agricultural importance in the United States. In each the Department has a principal county correspondent who maintains an organization of several assistants. These county correspondents are selected with special reference to their qualifications and constitute an efficient branch of the crop-reporting service. They make the county the geographical unit of their reports, and, after obtaining data each month from their assistants and supplementing these with information obtained from their own observation and knowledge, report directly to the Department at Washington.

In the townships and voting precincts of the United States in which farming operations are extensively carried on, the Department has township correspondents who make the township or precinct the geographical basis of reports, which they also send directly to the Department each month.

Finally, at the end of the growing season a large number of individual farmers and planters report on the results of their own individual farming operations during the year; valuable data are also secured from 30,000 mills and elevators.

With regard to cotton, all the information from the foregoing sources is supplemented by that furnished by special cotton correspondents, embracing a large number of persons intimately concerned in the cotton industry; and, in addition, inquiries in relation to acreage and yield per acre of cotton are addressed to the Bureau of the Census' list of cotton ginneries through the courtesy of that Bureau.

SCOPE OF CROP REPORTS.

Beginning with the planting, data are gathered and reports made as to the condition and acreage of each of the principal agricultural products,

such as corn, wheat, oats, rye, barley, potatoes, hay, cotton, tobacco, rice, etc. As the crops progress the prospects are reflected in monthly condition reports upon each growing crop; such reports being expressed in percentages, 100 representing a normal condition. A normal condition of 100 would be the condition of the plant where it gives promise of such a crop as might be expected if the plant were not subjected to damaging influences, but grew bountifully and under favorable conditions, including favorable weather, freedom from damaging insects, etc. A "normal crop" is not a crop which might be raised by exceptional skill or by an exceptional farmer, but such a crop that, planted and cultivated, will be produced if not subjected to damaging influences. At harvest time the yields per acre are ascertained, which, being multiplied by the acreage figures already ascertained, give the production or quantitative figures for the year.

Eleven monthly reports on the principal crops are received yearly from each of the special field agents, county correspondents, state statistical agents and township correspondents, and one report relating to the acreage and production of general crops annually from individual farmers.

Six special cotton reports are received during the growing season from the special field agents, from the county correspondents, from the state statistical agents, and from township correspondents, and the first and last of these reports are supplemented by returns from individual farmers, special correspondents and cotton ginneries.

The general reports for January and February are combined on one schedule and relate to the number and value of farm animals.

The general report for March relates to the stock of grain in farmers' hands, the distribution and consumption of corn, wheat and oats, and the average natural weight per bushel of the wheat and oats crop of the previous year.

Reports on the condition of the crops each year begin with the April report, when the condition of winter wheat and rye, prevailing diseases of farm animals, and losses from disease and exposure are dealt with.

The report for May comes at a time when few of the crops are sufficiently advanced for their condition to be reported upon; consequently the inquiries relative to condition apply only to winter wheat, rye, meadow lands and spring pasture. This schedule also deals with the portion, if any, of the original acreage sown to winter wheat that for any reason has been or will be abandoned, and contains inquiries with regard to farm labor and tenants.

The schedule for June deals with the acreage of six crops, the most important of which is spring wheat. It also covers the condition of wheat, oats, barley, rye, clover, spring pastures, apples, peaches and rice.

The July schedule deals with the acreage of corn, potatoes, tobacco and sugar cane; the stocks of wheat in farmers' hands; the average condition of all the principal crops, fruits and spring pastures, and the average weight of wool per fleece.

The August schedule deals with the average yield of winter wheat per acre, acreage of buckwheat and hay, the condition of the principal crops, the quality of clover hay, and the stocks of oats in farmers' hands.

The September schedule deals with the condition, when harvested, of wheat, oats, barley and rye; the acreage of clover seed; the production of peaches, and the number and condition of stock hogs on hand for fattening.

The October schedule deals with the average yield per acre and the quality of spring wheat, barley, oats, rye and hops, and the condition of corn, potatoes, sugar cane, tobacco, rice and apples.

The November schedule deals with the average yield per acre of corn, buckwheat, potatoes, hay, tobacco and rice.

The December schedule deals with the production and farm prices of all the principal crops, the acreage of winter wheat and rye sown for the crop of the following year, and with the condition of winter wheat and rye.

In addition to the foregoing the reports during the past two years have been extended to include condition figures of many small fruits, vegetables and minor products. Information in regard to such products has been urgently requested, and as a basis for comparison has now been satisfactorily established the reports are received with interest and favorable comment.

TRANSMISSION OF REPORTS TO BUREAU BY CORRESPONDENTS.

Previous to the preparation and issuance of the Bureau's reports each month, the correspondents of the several classes send their reports separately and independently to the Department at Washington.

In order to prevent any possible access to re-

ports which relate to speculative crops, and to render it absolutely impossible for premature information to be derived from them, all the reports from the state statistical agents, as well as those of the special field agents, are sent to the Secretary of Agriculture in specially prepared envelopes addressed in red ink with the letter "A" plainly marked on them. By an arrangement with the postal authorities these envelopes are delivered to the Secretary of Agriculture in sealed mail pouches. These pouches are opened only by the Secretary or Assistant Secretary, and the reports, with seals unbroken, are immediately placed in the safe in the Secretary's office, where they remain sealed until the morning of the day on which the Bureau report is issued, when they are delivered to the Statistician by the Secretary or the Assistant Secretary. The combination for opening the safe in which such documents are kept is known only to the Secretary and the Assistant Secretary of Agriculture. Reports from special field agents and state statistical agents residing at points more than 500 miles from Washington are sent by telegraph, in cipher. Those in regard to speculative crops are addressed to the Secretary of Agriculture.

Reports from the state statistical agents and special field service in relation to non-speculative crops are sent in similar envelopes marked "B" to the Bureau of Statistics and are kept securely in a safe until the data are required by the Statistician in computing estimates regarding the crops to which they relate. The reports from the county correspondents, township correspondents and other voluntary agents are sent to the Chief of the Bureau of Statistics by mail in sealed envelopes.

PREPARATION OF REPORTS.

The reports from the different classes of individual correspondents received by the Department are tabulated and compiled and the figure for each separate state arrived at. After the reports from the different counties are tabulated a true weighted figure for the state is secured by taking into consideration the relative value which the total acreage or production of each county in the state bears to the total acreage or production of the state. The weighted figure showing the value of the county is applied to the acreage, yield per acre, or condition, whichever it might be, and from the totals of the weights and the extensions a weighted average for the state is ascertained.

The work of making the final crop estimates each month culminates at sessions of the Crop-Reporting Board, composed of five members, presided over by the Statistician and Chief of Bureau as chairman, whose services are brought into requisition each crop-reporting day from among the statisticians and officials of the Bureau, and special field and state statistical agents who are called to Washington for the purpose.

The personnel of the Board is changed each month. The meetings are held in the office of the Statistician, which is kept locked during sessions, no one being allowed to enter or leave the room or the Bureau, and all telephones being disconnected.

When the Board has assembled, reports and telegrams regarding speculative crops from state and field agents, which have been placed unopened in a safe in the office of the Secretary of Agriculture, are delivered by the Secretary, opened and tabulated; and the figures, by states, from the several classes of correspondents and agents relating to all crops dealt with are tabulated in convenient parallel columns; the Board is thus provided with several separate estimates covering each state and each separate crop, made independently by the respective classes of correspondents and agents of the Bureau, each reporting for a territory or geographical unit with which he is thoroughly familiar.

Abstracts of the weather condition reports in relation to the different crops, by states, are also prepared from the weekly bulletins of the Weather Bureau. With all these data before the Board, each individual member computes independently, on a separate sheet or final computation slip, his own estimate of the acreage, condition, or yield of each crop, or of the number, condition, etc., of farm animals for each state separately. These results are then compared and discussed by the Board under the supervision of the chairman, and the final figures for each state are decided upon.

The estimates by states as finally determined by the board are weighted by the acreage figures for the respective states, the result for the United States being a true weighted average for each subject. Thus, the figures for the United States are not straight averages, which would be secured by dividing the sum of the state averages by the number of states; but each state is

given its due weight in proportion to its productive area for each crop.

METHOD OF ISSUING REPORTS.

Reports in relation to cotton, after being prepared by the Crop-Reporting Board, and personally approved by the Secretary of Agriculture, are issued on the first or second day of each month during the growing season, and reports relating to the principal farm crops and live stock on the seventh or eighth day of each month. In order that the information contained in these reports may be made available simultaneously throughout the entire United States, they are handed, at an announced hour on report days, to all applicants and to the Western Union Telegraph Company and the Postal Telegraph Cable Company, who have branch offices in the Department of Agriculture, for transmission to the exchanges and to the press. These companies have reserved their lines at the designated time, and forward immediately the figures of most interest. A mimeograph or multigraph statement, also containing such estimates of condition or actual production, together with the corresponding estimates of former years for comparative purposes, is prepared and sent immediately to Exchanges, newspaper publications and individuals. The same day printed cards containing the essential facts concerning the most important crops of the report are mailed to the 77,000 postoffices throughout the United States for public display, thus placing most valuable information within the farmer's immediate reach.

Promptly after the issuing of the report, it, together with other statistical information of value to the farmer and the country at large, is published in the Crop Reporter, an eight-page publication of the Bureau of Statistics, under the authority of the Secretary of Agriculture. An edition of over 120,000 copies is distributed to the correspondents and other interested parties throughout the United States each month.

UNIFORM GRADING.

The basis for the agitation for uniform grading is the unsatisfactoriness experienced by shippers and receivers of the differences that may exist in markets as to what shall constitute certain grades and the narrow intent that possesses some people to profit through loose grading methods. There is always more or less friction between buyers and sellers and the necessity of a fair and impartial inspection system is manifest to all.

A market must rest upon the integrity of its inspection. The buyer is one to be solicited. If the seller did not have to cultivate his customers, urge the excellence of his wares, the great advertising era that is dominant in the world would never have been called into existence. A market must have a sound foundation before even printers' ink can sustain its activity. The quality of its goods and the treatment accorded its buyers are primal assets. This is the best kind of advertising and all other is ancillary.

The chief cause in the agitation for uniform grading that was discussed so vigorously at the St. Louis meeting of the grain dealers was due to the dissatisfaction that seaboard receivers have expressed over the discrepancy in grain bought to arrive. Their claim has been that it was neither up to sample nor properly docked in many instances. The friction reached such a degree of irritation that the governors of the two great commonwealths of Missouri and Illinois were requested to investigate the inspection departments of their respective states.

Our foreign trade has suffered materially from grading that did not meet the approval of importers. This is a statement that bobs up at nearly every meeting that deals with foreign trade. Competition is getting too keen, the commerce of the world too necessary and too big to be checked in its expansion because by peculiar practices that spell losses rather than profits in the end.

Uniform grading under Federal government inspection seems destined to be adopted some day. It is not a radical innovation. It is only a substitution that whether better or not than the present system will give to foreign buyers the Federal government stamp which carries more charm than individual states. And domestic buyers rather welcome the change.—Minneapolis Market Record.

Shippers in the Northwest complain of the condition of cars furnished them as being very bad. The number of cars arriving at Duluth and Minneapolis terminals is certainly so very large as to be more noticeable than usual.

The CO-OPERATIVES

The Odell Farmers' Elevator Co., at Odell, Neb., has been sued for \$926.92 by T. H. Bunch & Co., Little Rock, Ark., for damages resulting from unfilled contracts for grain.

The Stonington Farmers' Grain Co., Stonington, Ill., with elevators at Stonington and at Blue Mound, has been in operation for two years, but has paid no dividends.

The Farmers' Society of Equity was organized at Indianapolis on October 29 by J. A. Everett and others. This is an opposition to the American Society of Equity, of which Mr. Everett was the founder some years ago, but of which he was crowded out some time ago.

The Farmers Bank of Emerado, N. D., has begun suit against the Emerado Farmers' Elevator Co. to recover an overdraft of \$3,257.97. The bank's complaint is that the plaintiff had on deposit for the elevator company June 19, 1907, \$6,660.98, which was subject to check; that the defendant made deposits and drew checks at various times, and on October 3, 1907, had overdrawn the account in the sum of \$3,257.97. This, the plaintiff says, it has demanded and that the defendant has made no reply.

SOCIETY OF EQUITY'S ANNUAL.

The spring wheat and flax growers' branch (three states) of the American Society of Equity held an annual meeting at Fargo, N. D., on October 26 with seventy-five delegates on hand from North Dakota, South Dakota and Minnesota.

The chairman, Theodore G. Nelson, said that "in order for the farmer to get the most out of his crops it was necessary for him to pledge his grain"—that is, not to sell it until some factotum of the Society gave him permission to do so; and that "in order to do away with a large number of middlemen's profits it was the intention of the officers to secure a pooling of the crops for next year, which would be sold by a committee from and appointed by the district union members, and that 1 cent per bushel should be taken from the selling price to pay the expenses of selling the grain in this manner."

E. D. Pauley, national secretary, was on hand, making an effort to sell a number of life memberships, which could be secured by paying \$50. "The Society needs the money."

The committee on legislation made a report recommending the following, among other things, which was adopted:

That state laws be enacted requiring hay balers and thrashers to report to proper officers the number of bales of hay pressed and the number of bushels of grain thrashed.

That state laws be enacted requiring all dealers in seed products for the farm to state the degree of purity of such seed.

That we demand a law prohibiting boards of trade from gambling in farm products.

That we heartily indorse the McCumber bill providing for Federal inspection of farm products and insist upon its passage at the next session of Congress.

That we earnestly recommend that this department select a committee of three to visit Washington during the next session of Congress for the purpose of presenting our cause before that body, and that said committee shall also solicit foreign trade for our products.

The committee on the pledging of grain for the past summer made the following report to the convention, which was adopted as read:

That the fees on pledged grain shall be collected by local union secretaries wherever possible and by them paid into the treasury of the local union. Local secretaries shall be allowed as compensation for their services as collectors 2 per cent of all money collected.

That the board of directors of the district union shall use the money collected on pledges to pay all solicitors, to satisfy all debts incurred by the state union of the grain growers' department and individuals incidental to the pledging campaign of 1908 and keep all moneys that may accrue above this in the treasury and use it to inaugurate a pledging campaign for 1909.

One of the sessions was opened by Senator Hansbrough of North Dakota, who "congratulated the Society upon the promising outlook of its efforts to sustain the prices of farm products. He said that the manufacturers had succeeded in fixing the prices of their products and the railroads in regulating rates of transportation so as to guarantee profitable returns upon investment. The great problem now was to prevent these industrial institutions from levying excessive charges, from laying tribute upon the consumers in order to pay dividends upon watered stock. The farmers, he said, would be

satisfied with a fair profit for their labor, upon a just and reasonable return upon the actual value of their property. The only way they could bring this about was through organization and intelligent efforts in handling and marketing their crops.

"Congress," he said, "has made an important beginning in the matter of legislature to protect the wheat farmer against the dishonest methods of the middlemen. It had authorized a laboratory system whereby the quality and condition of grain could be officially ascertained. These laboratories were now in successful operation at five leading export points, and under legislation now in force the consignor of American grain could get a government certificate showing the character of the shipment. This would be a great help. Foreign buyers preferred government to private inspection. Under this system responsibility could be definitely fixed.

"This laboratory system was a necessary step toward complete government inspection of grain. The existing law on this subject can be extended from time to time so as to substitute federal inspection for board of trade inspection. In the final analysis it would be better for both the producer and the buyer and the time is not far away when the commission men would gladly accept federal inspection as the final and best solution of the question.

"The Department of Agriculture has an intelligent grasp of the subject, and with some additional authority from Congress in the matter of grain grades a wonderful change will be wrought in marketing methods. There is no reason why the plan of the Society of Equity to have an official inspection of grain when a sufficient number of producers asked for it at any given point should not succeed. It is both reasonable and practicable, and a few lines of additional law is all that is required.

"The Federal inspection system can thus be extended so as to cover every grain center in the country. I believe the fee system for local inspection is wise. The farmers will not object to paying a small fee for inspection. In this way the producer will be in closer touch with the situation. At the larger grain centers, where wheat required a second or third inspection, the government must have a permanent inspector working in co-operation with the laboratory."

On the following day the Society's "pledge" was presented and adopted, as follows:

Whereas, It becomes necessary to maintain an organization with officers and assistants and to put forth united effort for producing and marketing our grain in order to successfully combat artificial causes of unsteady and generally unprofitable prices for our grain; and

Whereas, The grain growers in different parts of the United States now have provided an organization known as the American Society of Equity, Department of Grain Growers, with national headquarters at Chicago, Ill., of which our district, state, county and local unions are a part, whose purpose and duty it is, under the provisions of the constitution and by-laws of said organization, to do everything deemed necessary and possible to guard the interests of the grain growers generally, and especially to aid them in obtaining equitable returns from the sale of all crops comprised in this department. Among the things which it is now deemed necessary to do and which will be done in proportion to funds created as per this pledge, are the following: Calling conventions for the purpose of discussing and determining what constitutes an equitable price for grain; when, where and how to market it, and such other matters as will eventually bring to the producer equitable returns for the toil which his products represent; aiding farmers to get the use of local and terminal storage facilities; to obtain money advances on grain stored, and establish receiving and selling agencies in the principal markets, and to secure honest grading and weighing, fair freight rates, etc.; therefore, be it

Resolved, That in consideration of the foregoing and other covenants on the part of the American Society of Equity, Department of Grain Growers, our district, state, county and local unions, and other benefits that may be derived, I, the undersigned, do hereby agree

First. Not to sell, promise to sell or contract otherwise provided, any of the crops designated above my name hereon, for any other price or in any other manner than as may be determined by vote of delegates to delegate meeting to be called as per provision set forth on the opposite side hereof, all of which is a part of this agreement.

Second. To pay in the manner directed by the herein provided-for delegate meeting, 1 cent for every bushel of wheat or flax designated above my name hereon or that may be raised on the acreage set above my name. It being agreed and understood that said 1 cent per bushel shall not become due and payable until October 15 of each year; provided, however,

First. That if, after having given notice as per form B, which will be furnished on application, I must have money advanced on said crops in order to hold them under the above agreement, having allowed a reasonable time, not less than twenty days, in which to get it, I shall fail to get not less than 50 per cent of local market value on said crops based on the prevailing price on receipt of said notice at the state headquarters, and at local current rates of interest, then this pledge shall be null and void. It being understood that if required I shall store my grain in such manner that it may be properly insured and a warehouse receipt issued.

Second. That if, after making demand, on regular form and at least thirty days before date needed, for storage room for a certain number of bushels, the same shall not be provided at a cost of not more than 1 cent a bushel per month (insurance included), then this pledge shall be null and void.

The delegate meeting referred to is the annual meeting of the district union, which shall be held in Fargo each year some time in July.

ACCUSED OF FRAUD.

On complaint of W. H. Goltra, the Albany Farmers' Co. of Albany, Ore., was recently placed in the hands of S. M. Garland of Lebanon as receiver. The company is not only declared to be insolvent, but to be guilty of fraud, in that it has disposed of a large quantity of wheat and oats stored in its warehouse. Mr. Goltra, who is a capitalist and retired merchant of Albany, alleges that the company should have on hand about 60,887 bushels of oats and about 22,681 bushels of wheat belonging to himself and other parties who have stored the grain in the company's warehouses, but that it has only about 25,000 bushels of oats and about 4,000 bushels of wheat. The shortage of the company, it is alleged, is expected to reach at least \$25,000.

The basis of the complainant's action, according to the allegations of his bill, is that the directors of the company are disposing of a part of the grain remaining in the company's possession to the injury of himself and other creditors. He alleges that the directors, "with full knowledge of said insolvency of said corporation, have furnished money and claim to have bought therewith a large portion of the oats so stored in said warehouses of about 10,000 bushels, and are engaged in shipping the same out of the warehouses of the defendants, claiming to have sold the same" to certain business men who are named.

He asks for an injunction to prevent the directors from proceeding with this shipment, alleging that if the shipping continues he will not be able to receive his just proportion of the oats and wheat still contained in the company's possession.

The directors of the company admit the insolvency of the company, but assert they are now working for the best settlement possible for the creditors. Many of them will provide personal funds toward this end. The alleged shortage of the company is partially covered by bonds given by the company under the state warehouse license law. The present shortage is alleged to have occurred in grain stored during 1906 and 1907, and the bondsmen of the company for those two years may be liable for a part of the shortage. The company gave a bond of \$15,000 each year.

In the same matter the Eugene Mill and Elevator Company has begun an action in the United States court charging the company with disposing of wheat and oats stored in its warehouse and refusing to account or settle for the grain. The Eugene Company's claim is for 2,929 bushels of wheat valued at \$2,753.63.

Another claim is for 1,887 bushels of wheat.

Perhaps the most serious allegation is made by William Long, a grain buyer of Eugene, who states that the Farmers' Company got away with 873 bushels of oats belonging to him and then issued a check uncashable when the holder of the warehouse receipt presented it for settlement. He claims to have sold the warehouse receipt to J. R. Baltimore, and that the latter is holding the check, which was refused by the bank upon which it was drawn.

"We call your attention to the grading of wheat at Winnipeg, which shows every day a small amount of one northern, moderate amount of two northern and large amount of lower grades and stuff unfit to grade," say C. E. Lewis & Co., Minneapolis. "This is conclusive evidence that the amount of good milling wheat in Canadian Northwest is small while amount of chickenfeed is large."

PERSONAL

Henry Beadle is again in charge of the Gibbons Elevator at Glenwood, Neb.

Fred Reynolds is buying grain this season at the Miller Elevator at Graceville, Minn.

Fred Steinhauser has succeeded Jacob Niessein at Sage Bros.' Elevator at Mountain Lake, Minn.

Theodore Wisenberger has been appointed manager of the Hawkeye Elevator at Roberts, Mont.

A. Platner is now in charge of the elevator of the Ellsworth Mill and Elevator Co. at Ellis, Kan.

E. R. Tippin is at Denison, Kan., for the present remodeling and rebuilding the elevator at that place.

W. Flath has gone into the grain business at Sherwood, N. D., and is buying Canadian grain in hand.

Anderson & Anderson will buy grain for the Osceola Mill and Elevator Co. at Shafer, Minn., this fall.

Jas. T. Rattray has been installed as agent at the Alberta Pacific Elevator Co.'s house at Killam, Alta.

Herman Gillig has assumed the position of manager for the Monroe Grain and Milling Co., Monroe, Ind.

Ashley Andrews has removed from Latimer to Coulter, Iowa, taking charge of an elevator in the latter place.

Thomas Purdy has been given the management of Turner Bros.' hay, grain and coal business at Cumberland, Iowa.

F. E. Diemer has resumed his duties as local agent for the Grain Producers' Elevator Co. at Barnesville, Minn.

Mathew M. Levy, a prominent grain broker of Paris, France, was recently a visitor on the Chicago Board of Trade.

Fred Schultz has resigned as agent for the Columbia Elevator Co. at Scranton, N. D., and will remove to Texas.

S. C. Fullerton has been certified as Oklahoma state agent for the Lanning-Harris Coal and Grain Co. of Kansas City, Mo.

M. Rafferty has resigned his position as agent for the Jameson Elevator Co. at Afton, Minn., and will remove to St. Paul.

J. E. Doffing has resigned the management of the Farmers' Elevator at Hastings, Minn., and has been succeeded by J. M. Stokes.

J. T. Sellers and his son, Frank Sellers, who recently lost their elevator at Illinois, Ill., by fire, are now residing at Momence, Ill.

B. E. Rich has removed from Waverly, Ind., to Kankakee, Ill., where he has become associated with his brother, W. E. Rich, in the grain business.

S. G. Sands has taken charge of the Rogers Grain Co.'s business at Pontiac, Ill., and will remove to that place from his former home at Cornell, Ill.

John Waldorf has resigned as buyer for the Empire Elevator Co. at Stewart, Minn., and has been succeeded by Nick Schulthis, formerly of Hankinson, N. D.

Claude Terwilliger has assumed charge of the Gribbin Elevator at Overly, N. D., recently purchased by him. Mr. Terwilliger will remove his family to Overly.

Henry Hunter has resigned his position with the Osborne-McMillan Elevator Co. at Parker's Prairie, Minn., to accept a position with a grain company at Ogema, Minn.

C. H. Nobes has succeeded N. E. Norman as agent for the Hammer-Halvorsen-Beier Elevator Co. at Cooperstown, N. D. Mr. Norman has removed to Turtle Lake, N. D.

J. K. Simpson has taken the position of grain buyer for the Trans-Mississippi Grain Co. at Elm Creek, Neb. George Barrett, the former buyer, has been transferred to Callaway, Neb.

Otto A. Zimmerman, a prominent young grain dealer of Minneapolis, and Miss Daisy G. Berry of San Francisco were united in marriage on November 4, at Mankato, Minn. Mr. and Mrs. Zimmerman will reside in Minneapolis.

H. T. Robson, representing the grain house of Ross T. Smythe of Liverpool, England, has recently made a tour of central and western Canada investigating wheat conditions in those sections for his firm.

August Benthe and John Emmen have resigned as agents for the Northwestern and Thorpe Elevator companies, respectively, at Clara City, Minn. J. Berghins and Peter Thein succeed them. Later the Northwestern Elevator Co. decided to close its house at Clara City until next fall.

BARLEY and MALT

At a recent meeting of the Winnipeg Grain Standards Board it was decided to establish a commercial grade for barley which shall include all barley weighing 42 lbs. and under.

On October 27 the Schneider Brewing Co. shipped 110 tons of dried brewery grain to England via Galveston, Tex. The grain was purchased by a representative of the King and will be used in the royal stables.

Barley was the feature of this grain market to-day. Maltsters and mixers showed their revived confidence by buying 180,000 bushels to arrive at 56 to 57 cents, chiefly at 57 cents, for feed, 58 for low-grade malting to 64½ for prime. The new crop was marketed so freely while cars were plenty, the roads good and poor selling at small discount from prime, that now it looks as though the movement might be moderate from this on. The brewers in Ohio and Indiana evidently expect more "peace and quietness" when their new governors are installed.—Pope & Eckhardt Co., November 6.

BARLEY SITUATION.

The Government crop report issued September 1 showed a barley crop of 157,000,000 struck bushels, at the same time claiming a reduction in the condition of 4.6 with an average weight of 45 lbs. per bushel. On October 1 the Government crop report showed a crop of 167,000,000 bushels. They do not explain how this increase of 10,000,000 bushels came about. Were they mistaken in the first report, or is the last wrong? It goes to show that we cannot place much reliance in the Government crop report. But let us await the final report before comparing with last season.

The daily arrivals of barley have been the largest in history, but all was absorbed without much of a reduction in price, which goes to show that the barley is wanted, and mostly for mixing with oats, and for feeding, says W. H. Prinz in the American Brewers' Review. Barley at the present price is the cheaper feed by 10 cents per bushel, and, as a farmer told me lately, one bushel of barley is worth more than two bushels of oats for feeding purposes, and the use of barley for this purpose will increase in the future.

There must be another cause for these large shipments. The farmer must need the money, and has no faith in the future. It is reported that in Wisconsin fully 50 per cent of the barley crop has been marketed. Wisconsin being an old state with many rich farmers, what can you expect of the younger states? In Minnesota and Iowa, I am told, more than 60 per cent of the crop has been marketed, and in Nebraska and the Dakotas it runs up to 65 per cent. The farmer was not used to getting such a high price for his barley in former years, and as soon as barley went down he let go, being afraid it would go still lower, which will not be the case this year.

THE FARMERS AND BARLEY.

Robert J. Johnstone, in an interview with The Market Record, says: "Barley raising in the Northwest, counting only Minnesota, North and South Dakota, has grown in recent years to enormous proportions so that it is now attracting the attention of the entire world.

"This market as a barley center rose from nothing in eight years to its present size, the largest and broadest institution of its kind. The chief cause of this, however, is the fortunate geographical location of Minneapolis, as it lies in the direct path of the natural current as the crop is carried by the great railroads to where the people want the grain.

"The barley prices of the world are now made in Minneapolis, where the consumers of barley are compelled to come for their chief supply. History fails to reveal a season equal to that of last year when the great Northwest threw 22,000,000 of bushels of its crop upon the Minneapolis market at fabulous prices. The trade confidently expects receipts of 25,000 of bushels of barley this year and another phenomenal season will go down in the barley history of Minneapolis.

"The enormous receipts last year were not expected and everyone was astonished. It will be equally astonishing to see a repetition this year of last season by way of increased receipts, yet this amount is less than one-fourth of the crop raised in the three northwestern states.

"The production of barley has proven highly popular and profitable with the farmers of the Northwest, especially in those places where the land is still available at \$20 to \$30 per acre. Every report from the fields and from the farmers indicates continuous increase of barley.

"To the consumer it may seem incomprehensible if told that there are hundreds of in-

dividual farmers who raised anywhere from 5,000 bushels to 20,000 bushels upon their farms, yet this is true. It is little wonder that the farmers in the Northwest are growing so powerful and it may be said that the industry is to increase and the time is not far distant when Minneapolis will be recording barley receipts of 50,000,000 bushels instead of 20,000,000."

MALTSTERS AND BREWERS CLOSE BUYERS.

The malting market reflects the extreme conservatism that general industry leans to in the closing period of a political campaign. Close buying has been the dominating policy of the manufacturers, and conditions, as they affected this particular industry, have been more restrictive in their influence than in other lines.

Brewers are more keen to the possibility of adverse legislation than either the stock market or tariff-protected corporations, says the Minneapolis Market Record. Until the definiteness of the polls is sounded there is little reason to expect any encouraging tendency toward an enlarged demand.

Business has been limited to immediate needs. No attempt has been made to extend commitments into the field of future contracts. It is a two-sided affair at the ruling price level; to some there is every indication of a steady quotation list based upon the necessity of a general demand and the end of the heaviest first hand marketing; to others there is the reduced consumption of beer and no betterment in industrial conditions, which, of course, is a serious factor.

"A malt market like the present," says The Brewers' Daily Bulletin, "has not been experienced for many years. Although the present level of quotations is very favorable as compared with last year there is hesitation on the part of both brewers and maltsters. At this time, during previous seasons, a large part of the malt output has been disposed of, but history has failed to repeat itself this season. Consequently the future trend of the market is rather problematical, based upon statistics and conditions of former years."

[From the New York Evening Post.]

A BIT OF HISTORY AND A COMPARISON.

The September railway earnings, reflecting the sudden and enormously heavy movement of wheat to market, and the increase of a million bushels or so per week in the country's wheat export, were to many people an interesting reminder of 1897. The analogy deserves some closer study, because now, as at this time in 1897, the question uppermost in the popular mind is, how will this extraordinary movement bear on the question of revival in prosperity?

In 1897, as in 1908, trade had been dull and the business outlook uncertain. The fortunate result of the 1896 Presidential election had not, as many people imagine, instantaneously swept away the clouds from the industrial sky. Early in 1897, so contemporary critics wrote, our industries were depressed and gloomy. Prices of merchandise were falling; the Economist's "index number" of July, 1897, was the lowest in modern history. In the middle of 1896 there were 191 iron foundries in blast in the United States, with a weekly output of 180,500 tons, and with 815,000 tons on hand unsold. In the middle of 1897 there were but 145 furnaces in blast, with only 164,000 tons weekly output, and with 1,000,000 tons of accumulated iron.

THE GRAIN SITUATION OF 1897.

The whole world's wheat yield in 1896 had been the lowest in half a dozen years; the yield in 1897 was 250,000,000 bushels smaller. Europe's harvests alone, as a result of disastrous weather, were cut down from the 1,509,000,000 bushels of 1896 to 1,157,000,000. Usually the September "world's visible" of those days exceeded 150,000,000 bushels; the month's returns in 1897 showed only 66,500,000. While this was happening the United States in 1897 produced a wheat crop 102,000,000 bushels larger than that of the year before, and never but once exceeded in the country's history. The first result was such a demand by Europe for our wheat and such pressure to move it quickly from farm to storehouse that the railroads could not get enough cars to handle their traffic or the freight brokers get enough ships to execute their commissions. The second result was a great increase, directly in railway earnings, and indirectly in general trade, revival of which set in at once when the farm communities began to spend their money. As everyone knows, the episode led rapidly to the real industrial prosperity of 1898.

THIS YEAR'S PARALLELS.

Like 1897, the present year followed a year of world-wide shortage. From 3,435,000,000 bushels in 1906, the world's wheat crop fell in 1907 to

3,108,000,000. As in 1897, so in 1908, the European crop next after that world-wide shortage was even smaller. Preliminary estimates have figured out this year's European harvest as 40,000,000 bushels under 1907 and 216,000,000 less than in 1906. On August 1, as a consequence, Europe's supply of wheat in granary was nearly 13,000,000 bushels less than a year before, and was lower than in any but one of the ten preceding years. In America the "visible supply" was 32,000,000 bushels below that of August, 1907. In the face of this came our wheat yield of this summer—not, indeed, like the crop of 1897, a "record-breaker," but, nevertheless, larger by 25,000,000 bushels than the harvest of last year.

With foreign supplies of wheat so low, recourse to our market by European grain houses began with harvest time. In August, September and October our wheat exports ran 12,000,000 bushels ahead of 1907, but this did not measure the full demand for carrying wheat to market. Our own reserves in city storehouses, as we have seen, were very low; demand to replenish them was immediate. In September the amount of grain carried by rail from farms to the inland distributing markets broke all records; the month's receipts at "primary points" ran to 86,000,000 bushels, against 76,000,000 in September, 1907, and only 68,000,000 in that month of the great wheat year, 1906. We saw one immediate sequel in the astonishing comparison of September earnings of the grain-carrying railways.

WILL THE ANALOGY GO FURTHER?

How much, then, have we the right to infer from this interesting parallel? Are we, or are we not, to feel the good results in general trade this year as abundantly as we felt them after the similar grain trade situation of 1897? That the country's trade, as a whole, must be helped to some extent by the grain market results is a certainty; the larger problem is, do they mean revival of what we call prosperity? It is in some respects a little early to give the answer. For one thing, we cannot yet say to what extent the September movement of grain to market only anticipated, with abnormal haste, the movement which ordinarily comes later, thus leaving less wheat than usual for the farmers to sell and for the railways to carry in the winter months. Such data as we have for October give some hint that this is so. That month's deliveries of grain at inland "primary markets" were less by 22,000,000 bushels than September's, and where such deliveries in September were nearly 10,000,000 bushels ahead of 1907, October's ran 6,000,000 behind last year.

Some such decrease must always occur when farm reserves have been drawn down by heavy marketing, but when it comes the question arises whether some other form of commercial activity will or will not replace the wheat traffic as an influence. In the late months of 1897 there were such other influences. Our country's windfall in the grain trade seemed to have opened people's eyes to the fact that times were no longer hard and that they themselves were no longer poor. We had learned to manufacture on a low basis of cost; we were underselling Europe; the "American invasion" was under way, and the reasonable prices asked for merchandise coincided with individual bank accounts well stocked with the savings of four years of rigid economy. What we have now to learn is whether, in this direction, we shall or shall not faithfully complete the parallel with 1897.



WILL IT BLOW OVER?

Argentine crop news should be watched.

Frost there recently is supposed to have done some damage. How much is an open question. Argentine shipped 136 million wheat this year, and was a factor in making world's prices, and will be again this year. A large crop may cause lower prices in all markets: a small one—higher.—J. F. Zahm & Co., November 7.

The grain firm of W. P. Deveroux & Co., Minneapolis, was the successful bidder on the government order of 7,000,000 pounds of oats for the Philippines, against companies in Seattle, Wash., Portland, Ore., and San Francisco. The bid was \$37 a ton in Seattle for 225,000 bushels.

FIRES-CASUALTIES

Crozier & Hardy's Elevator at Eldorado, Ill., was destroyed by fire on October 29.

Banting's Elevator at Treesbank, Man., was totally destroyed by fire in the early part of last month.

A fire originating in a coal bin caused a small loss at M. Truby & Son's Elevator at Joliet, Ill., on November 3.

The Lawrence Elevator Co.'s house at Lawrence, Mich., was damaged to the extent of \$500 by fire on October 21.

Dynamiters attempted to loot the safe of the E. A. Briggs Grain Co. at Attleboro, Mass., on October 28, but were unsuccessful.

The engine house of the Kasota Elevator Co., Kasota, Minn., was burned to the ground on November 6. The cause of the fire is unknown.

A general fire at Niantic, Ill., on October 15 destroyed Delaney Bros.' Elevator and several other buildings. The total loss is placed at \$20,000.

The Rexford Elevator, Rexford, Kan., was burned last month. The building, which was totally destroyed, was only partially covered by insurance.

A small blaze at the Cargill Elevator at Hancock, Minn., caused a slight damage to the house on October 20. The fire started from an overheated pipe.

The Royal Elevator at Anamoose, N. D., collapsed early last month, spreading 20,000 bushels of wheat on the ground. The loss to the building is estimated at \$1,000.

Fire starting in a dust room destroyed the elevator of Harvey Reed at Drexel, Mo., on October 11. The loss is estimated at \$5,000, with insurance amounting to \$2,300.

T. E. Sanding's Elevator at Wawanesa, Man., was destroyed by fire in the forepart of October. The building was insured, but the 9,000 bushels of grain will be a total loss.

The Winnipeg Elevator at Macdonald, Man., was totally destroyed by fire on October 16. About 5,000 bushels of wheat were destroyed. The blaze started from a hot box.

Sparks from a passing engine caused a fire at Wyoming, Ont., on October 17, which destroyed the grain warehouse of A. Laing. The building and contents were insured for \$1,400.

Firey Bros.' Elevator at Roby, Ill., was destroyed by fire in the latter part of last month. Locomotive sparks were the cause. The loss is placed at \$7,000, with \$4,700 insurance.

Fire believed to have started from crossed electric wires caused a slight damage, mostly to machinery, in the elevator of the Antigo Hay and Grain Co. at Antigo, Wis., on October 9.

The Davison Elevator at Uniondale, Ind., was destroyed by fire on October 28. Sparks from the railroad caused the fire. The loss on the building and contents is about \$8,000, with \$4,000 insurance.

The elevator of the Pease Hay and Commission Co. at Thornton, Iowa, was entirely destroyed by a supposedly incendiary fire on October 17. The loss is placed at \$10,000, fully covered by insurance.

A cylinder blowout in the engine room of Elevator A of the Port Arthur (Ont.) Elevator Co.'s plant on November 4 tied up the operations of that house for twenty-four hours. Fortunately no one was hurt.

The grain sheds of E. W. Kenerson & Co. at Worcester, Mass., were damaged to the extent of several hundred dollars by a fire on October 19. A carelessly thrown match is supposed to have been the cause.

Heavy grain pressure burst one of the large corner bins in the Farmers' Elevator at Cooksville, Ill., last month and let out several hundred bushels of shelled corn. The damaged part of the house has been repaired.

Fire originating in the elevator of W. H. Rockwell & Co. at Belle Plaine, Iowa, on October 19 was communicated to the Western Grain Co.'s Elevator and both were destroyed, leaving the town without a grain market. The loss on the two elevators and contents is estimated at \$18,000, partly covered by insurance.

The elevator and stock of the Commercial Milling Co. at Randolph and Atwater Streets, Detroit, Mich., was badly damaged by fire and water in the early part of October. The blaze started from an overheated bearing in the elevator tower. In subduing it the fire department was compelled

to use an enormous quantity of water, which practically ruined the 50,000 bushels of wheat in storage. The total damage is estimated at \$50,000. The elevator has been repaired.

The large hay shed of the W. P. Whittemore Grain Co. at Roslindale, Mass., was damaged by fire to the extent of \$5,000 or \$6,000 in the middle part of last month. The origin of the fire is unknown. The loss is fully covered by insurance.

The elevator of C. H. Wells & Co. at Greenville, Mich., was totally destroyed by fire on October 20. The fire originated in a lumber yard nearby and spread to the elevator. The loss is placed at \$8,000, with only a small amount of insurance.

The Windsor Grain Co.'s Elevator at Windsor, Ill., completed only a month ago, was destroyed by fire on November 4, with a loss of \$10,000. Corn to the amount of \$2,500 was also destroyed. The elevator was insured for \$4,000. The origin of the fire is unknown.

The Waters & Hoyt Elevator at Abilene, Kan., was completely destroyed by fire on October 29. The building was an old one and the fire, when discovered, had made such headway that the house could not be saved. The cause of the fire is not known. The loss is \$8,000, with \$6,000 insurance.

Firebugs are believed to have been responsible for a string of fires at Norfolk, Va., last month. Among them is the fire on October 15, which gutted J. N. Gwaltney's wholesale feed and grain store at a loss of over \$5,000, and also the fire which damaged the plant of the City Hay and Grain Co. on October 21.

Fire of unknown origin completely destroyed the stock of the Overstreet Grain Co. at Little Rock, Ark., on October 26. The building was damaged to the extent of about \$1,000 and the stock within it was a total loss, placed at \$5,000, with \$3,000 insurance. The Overstreet Co. will continue their business in Little Rock at another site.

The elevator of David Unger at Russiaville, Ind., was destroyed by fire on October 14. The fire is attributed to sparks from a passing locomotive. The town is without adequate fire protection, and within thirty minutes from the time the flames were discovered the elevator was completely destroyed. The loss is placed at \$10,000, with insurance of \$3,000.

The cleaning house and elevator of the St. John Elevator Co. at Le Sueur, Minn., was destroyed by fire recently. At the time of the fire only 1,000 bushels of wheat and about 3,000 bushels of barley were in the house. The grain was fully insured, but the building and machinery, which were a total loss, were only partially covered. A hot box caused the fire.

Elevator B of the D. Rothschild Grain Co. at West Davenport, Iowa, was entirely destroyed by an early morning fire on October 14. The origin of the fire is a mystery. The loss is \$75,000, entirely covered by insurance. Definite plans for rebuilding have not yet been made. The Corn Products Refining Co. and the Mueller Lumber Co. also lost heavily in the fire.

The big million-dollar fire at South Chicago, Ill., on October 16 caused a small loss to the big Calumet C Elevator. The intensity of the fire was so great that the fireproof walls of the elevator were nearly consumed, but fast work by firemen kept the flames away from the house. The fire, which is thought to have been incendiary, started at the docks of the International Salt Co.

The Bartlett-Kuhn Elevator at Vincennes, Ind., was entirely destroyed by fire on the night of October 21. Dust explosion in the tower of the elevator is believed to have started the fire. The city's water pressure had been greatly reduced at the time owing to another severe fire only a short distance away, and little could be done to save the elevator. Over 50,000 bushels of grain were in storage. The loss on the stock and plant is placed at \$75,000. The plant will be rebuilt.

The Grand Trunk Pacific has been opened for the delivery of grain at Winnipeg, thus opening a new grain line from the Canadian West. The Grand Trunk Pacific was busy with the grain traffic twelve months ago, when it carried hundreds of cars from points along its line into Portage la Prairie. It turned them over to the Canadian Northern Railway in that city, however, for shipment to Port Arthur, and in the government returns of inspection these were credited to the Canadian Northern. By the construction and operation of the link between Portage la Prairie and Winnipeg the Grand Trunk has come into direct touch with the system of inspection, and has attained to a position where it can demonstrate what an important factor it is in the grain trade of the West.

TRANSPORTATION

Grain shippers are offering 2 cents for holding grain at Cleveland, but no charters are reported.

The free time at Atlanta has been reduced by the Southeastern Car Service Association to 24 hours from 48 as hitherto.

Grain rates by lake to Buffalo advanced during the past 30 days to 1½ cents from Lake Superior and Lake Michigan ports. Charters were not numerous, however.

The Superior branch of the Grand Trunk Pacific, connecting with the main line at Ft. William, will be completed in December and be open for next year's grain traffic.

Grain shippers have been advised that the Interstate Commerce Commission has postponed until January 1 the operation of the rule forbidding the railroads to pay the three-quarters cent per hundredweight for "grain elevation." The original rule was to have gone into effect December 1.

The Santa Fe will on December 7 cancel the proportional rates of 12 cents on corn and oats and 13 cents on wheat from Kansas City, St. Joseph, Mo., Argentine, Atchison, Kansas City and Leavenworth, Kan., when originating beyond Cincinnati, applying only on traffic destined to Southeastern and Carolina territories.

The Interstate Commerce Commission on October 29 denied the application from Kansas City for a reopening of the elevator allowances case, but postponed the date effective of its order to the railroads to discontinue the grain suit allowance until January 1. The Missouri River shippers may go to the courts with their complaint.

The regular coastwise lines are making a rate of \$2 a ton of 2,000 pounds on wheat from Seattle to San Francisco. It is said that steam schooners have been taking a few cargoes at \$1.75 from the Sound and \$1.50 from Portland. At these figures steamers can deliver in the Bay City with scarcely any profit. The usual rate on coastwise wheat is \$2.50.

Kansas City, St. Louis and Omaha are before the Commerce Commission in an effort to adjust rates that shall suit all. Some time ago Kansas City shippers filed a petition with the Commission asking to be allowed a differential of 2½ cents over Omaha to St. Louis and 3 cents on grain for points east of St. Louis in place of the existing differential of 1 cent. St. Louis intervened, stating that if Kansas City was given such differentials St. Louis would have to go out of the grain business.

The Erie Canal, weather permitting, will this season be kept open until December 1, but after November 15 boatmen use the channel at their own risk. The barge canal contracts provide that the contractors shall be responsible for any damage to property transported on the canal between May 15 and November 15, but after November 15 the state will do everything possible for the safeguarding of canal boat traffic. State Superintendent Stevens announces that his department will now take special precautions for the protection of canal boats at the points where enlargement work is in progress.

A motion on behalf of the Delaware, Lackawanna & Western Railroad, the Erie, New York Central, the Pennsylvania, Lehigh Valley and New York, New Haven & Hartford asking for an injunction suspending the order of the Interstate Commerce Commission fixing the rates to be charged on grain products from Buffalo to New York, and Buffalo to Boston points, which becomes effective on November 1, until the suits in equity instituted by the railroad companies against the commission have been tried, was refused by the U. S. Circuit Court at Buffalo on October 20. The commission's order reduced the rate from Buffalo to New York to 10 cents and to Boston to 12 cents.

Transportation Manager W. M. Hopkins of the Chicago Board of Trade has sent out the following to grain shippers: "Announcement is made that effective November 1, 1908, the Eastern and Southern railways will require the new uniform bills of lading to be used on all shipments, but will permit until January 1, 1909, the use of the present form of shipping receipts or dray tickets, when such shipping receipts or dray tickets contain the following notation: 'This shipment is tendered and received subject to the terms and conditions of the company's uniform bill of lading effective November 1, 1908. This receipt is not negotiable, and if the shipment is consigned to order it must be exchanged for the company's uniform bill of lading.' The Western lines announce that they will require the use of the uniform bills of lading and will permit the use of shipping receipts or dray tickets bearing notation to the same effect as above shown. The

exact date of effectiveness on the Western lines has not been announced, but it probably will be December 1, 1908, or thereabouts. Failing to make shipment subject to the conditions of the new uniform bill of lading after its date effectiveness on either Eastern, Southern or Western lines will subject the shipper to a penalty of a rate 10 per cent higher, subject to a minimum increase of 1 cent per hundred pounds."

The U. S. Circuit Court of Appeals on November 6 issued a temporary or interlocutory injunction restraining the Commerce Commission from enforcing its order reducing the freight rates on commodities shipped from the Atlantic Seaboard to the Missouri River. In issuing the order the judges considered only one feature of the case, that of the alleged discrimination against Chicago and St. Louis in favor of New York and the East and the Missouri River cities. The question of the reasonableness of the proposed reduction of 9 cents a hundred pounds on first-class freight was not considered. In his oral opinion Judge Grosscup said that the order undoubtedly did create a discrimination against the interior points, but that the question whether it amounted to undue discrimination in the meaning of the Hepburn law was one for consideration at the final hearing.

Judge Kohlsaat on November 1 issued an order restraining the Illinois Railroad and Warehouse Commission from enforcing its recent switching order, fixing November 17 as the date for hearing on a permanent order to the same effect. The case which led to the switching rule is the result of an agitation begun by the Illinois Manufacturers' Association to gain relief from alleged exorbitant switching charges in Chicago. The operation of the order, according to the Association officers, would save the Chicago shippers fully \$2,000,000 annually. The railroad parties to the petition for injunction maintain that the Commission does not have legal authority to fix a switching district nor to define the term "switching." Many reasons are set forth why the rule is illegal, one of them being that it creates a favored class of shippers of the grain interests of Chicago, the rule of the Commission providing that the charges for the switching of grain should not be more than three-fourths of the charges exacted from other traffic; and also that the maximum charge on grain shall be \$3 for five miles, \$3.50 for distances between five and not over fifteen miles and \$4 for distances in excess of fifteen miles. It will be the contention of the railroads that the state commission cannot in this manner create a favored class of shippers and that the injustice of such a provision is accentuated by the fact that grain is a high-class freight and should pay as high a rate as any commodity. As a matter of fact, however, the new rule regarding grain simply seeks to make legal and to perpetuate a practice which the railroads have indorsed for many years, since the grain trade has been charged less rates for switching than any other industry, and the roads have made this reduction in their own interest, of course.

[From the Railway and Marine World, Toronto.]

RECIPROCAL DEMURRAGE: FROM THE RAILROAD POINT OF VIEW.

BY H. R. PATRIARCHE.

Manager Canadian Car Service Bureau, Western Lines.

The craze for railway legislation, so evident in the United States to-day, takes many peculiar forms. Among the most popular slogans is what is known as "reciprocal demurrage." The author of this phrase was intentionally or unintentionally a humorist, for the prominent feature of such bills has been their absolute lack of the faintest approach to reciprocity. Theory apparently says: "If a railway cannot perform that which its own interests demand, the proper procedure is to hamper its movements by legal persecutions and continuous financial drain." Any railway which fails to move traffic expeditiously suffers loss, for the life of a railway is constant motion. Where motion is retarded revenues decrease, where it stops they end.

The inability of railways to promptly provide empties for loading, under normal conditions, can nearly always be traced back to the failure of the public to unload or load promptly. In order to induce its patrons to release cars within a reasonable time, the railways charge a nominal toll of \$1 a car per day, but this is only assessed after the car has been in the hands of the consignee or shipper 48 or 72 hours, many hours longer than necessary to accomplish actual loading or unloading. Various commodities, of course, take different lengths of time to handle; a car of sack flour can be unloaded in forty-five minutes by six men trucking from car to warehouse,

while a car of plain matched flooring would have to be handled much more carefully, and would require possibly eight working hours for unloading by team and storing in warehouse, a short haul. In addition to the 48 hours or 72 hours allowed for loading or unloading, the rules provide for extra time where cars have been bunched in transit, through wrecks, stress of weather, washouts, or for any reason not chargeable to the consignee or shipper, and during this free unloading or loading period the cars must be in position, accessible, and the weather suitable for outside work, otherwise an additional allowance must be made.

It is therefore evident to the unprejudiced mind that no business firm or institution need ever pay a dollar of car rental provided its facilities for loading or unloading cars are equal to the business it handles. As this, however, is not generally the case, car rental is collected daily, and to offset such collections the prejudiced members of the business communities are endeavoring to inflict a fine upon the railway companies under the above caption. Some two or three years ago the earnings of all the box cars in the United States were lumped, divided by 365, and again by the number of cars in commission. The result was an average earning of \$2.09 a car per day, and this, it must be remembered, was the average per car regardless of the number of days said car was held for repairs or traveled light, without cargo. At certain seasons of the year a car will earn from \$4 to \$10 a day, and therefore it is readily seen that the toll of \$1 a day represents a loss to the owners of the car of from \$1 to \$9 a day. From this it is evident that the enforcement of car rental is not a revenue proposition but an attempt to get proper movement of rolling stock. Anything which produces this result not only benefits the railways, but also every business interest shipping or receiving freight in carload lots.

Let us consider the work of the Madden bill at present before the U. S. Senate, taking our viewpoint from Winnipeg, the metropolis of the last West. A fine of \$1 a day is imposed for failure to provide cars within three days after ordering, and in addition to this the carrier must pay all actual damages that such applicant may sustain, including the cost of the suit and a reasonable attorney's fee." The bulk of the grain movement in this country is from the West east to the lake gateways, Fort William and Port Arthur, 400 miles from the outskirts of the grain producing territory, and many millions of bushels are never placed under a warehouse roof until they reach the elevators at these points, the farmer loading direct from the fields to cars. It is easy to see the results of these long hauls when every man is attempting to get his grain to market before the close of navigation. Hundreds of thousands of cars must be hauled empty from Fort William and Port Arthur to distant loading stations in the West, as the eastbound movement of grain is far greater than the westbound movement of other freight. Grain is shipped from points north, west and south of Medicine Hat, which is 1,086 miles from Fort William. It is therefore evident that an order placed at Medicine Hat might have to be filled with cars from Fort William, and to comply with the regulations of the Madden bill, these cars if immediately set in motion by wire would have to travel 362 miles for each 24 hours in order to reach Medicine Hat within the period allowed the railways to fill such order. And yet, after specifying that cars must be provided in 72 hours, the Madden bill goes on to say that 60 miles a day is an acceptable average distance.

As an example, let us say that Brown & Co., grain dealers, Medicine Hat, Alta., place an order for 24 cars to load with wheat, the market price falling rapidly. The railway agent immediately wires his car service superintendent, who finds every empty in transit, or prospective empties at nearby points booked for reloading at points intermediate between Fort William and Medicine Hat. The car service superintendent immediately wires Fort William to hurry forward 24 cars. These are started, though by no possible chance can they get to Medicine Hat in three days. They arrive in say 10 days, and the railway is charged \$7 a car because the box cars had no wings and could not fly; total, \$168. But during the seven days wheat has dropped 5c. a bushel, and this also the railway must make good; total \$1,200, and the cost of the court, say, \$100; grand total, \$1,468. Brown & Co. collect this money and cars go forward, now the property of Smith & Co., who say they want them for a vessel sailing 19 days later. Through an unavoidable chain of circumstances it takes these cars 20 days to make the 1,086 miles to Fort William, and as the vessel has sailed the grain is put in the terminal elevator by Smith & Co. A suit is then started against the railway company and an additional 5c. per bushel is demanded on account of falling

market, \$1,220; cost of storage to spring, say, \$180; interest on investment at 6 per cent, \$1,008; cost of court, \$100; demurrage, \$24; grand total, \$2,512. Thus because the railway company did not accomplish the impossible and avoid the unavoidable, it must pay the owners of the grain \$3,980, and this risk for the privilege of attempting to earn net freight of say \$600.

Following the possibilities further, we will say that in the spring the market rises, and Smith & Co. find their grain is worth 10c. more per bushel than they paid for it. They are then ahead the railway's loss, \$2,552, and the increase in value, \$2,440, a total of \$4,992. Does the railway get a share of this profit? Not according to reciprocal demurrage, for the reciprocating feature automatically retires at this juncture, and Smith & Co. pocket the full amount. Now, suppose during the seven days' overtime it takes to get Brown's cars from Fort William, grain advanced 5c. a bushel. Will Brown come forward with a happy smile and pay the railway company the \$1,200 he is ahead by such unavoidable delay? The reciprocal demurrage bill does not say so. Instead of dividing up his profits or giving the entire amount to the railway, Brown demands \$7 a day per car, or \$168 demurrage. Again, suppose that Brown & Co. know or have reason to suspect that 24 empties cannot be furnished in the specified time, and booked their order with the intention of cancelling it when filled. Does reciprocal demurrage reimburse the railway company for hauling 24 cars 1,086 miles? Of course not. Brown demands \$168 for failure to place the cars within the specified time, cancels his order and pays the railway company \$24 for the one day the cars stand on his siding, in addition to a "reasonable switching charge." The loss to the railway company in this event would be \$144 reciprocal demurrage, the difference between a "reasonable switching charge" and the actual cost of hauling the cars this vast distance, say, \$10 a car, or \$240. Also the value of 24 cars for 10 days at, say, \$4 a day, \$960; total, \$1,344; and the railway must also haul these 24 cars to another point and suffer additional delay in arranging for loading by other parties. And this action of Brown & Co. may inflict an additional fine on the railway company for failure to supply cars at another point.

Does the Madden bill provide that only well-known firms, honest and reliable like Brown & Co., can inflict this great loss on the railways? It does not, but states that the carrier must accept orders from "any and all persons or corporations who apply therefor." Not only can Tom, Dick and Harry place orders for empty cars, refuse them after arrival, and collect the difference in penalties and damages, but these cars must also be placed for loading "at any point that cars are desired." We presume this means on a spur in the wilderness, a flag station, or even the main track if the shipper elects. And the reciprocal feature of this bill is so broad that while the railway company must pay for every day over and above the free time allowed to provide empties, the consignee is exempted from Sundays, national and state holidays, stress of weather, bunching in transit, etc. With reciprocal demurrage in force this Western country would prove a bonanza to any shrewd shyster with capital sufficient to buy a few thousand bushels of grain, and brain enough to keep track of railway conditions, ordering and refusing cars at will and pocketing the penalties.

The fourth paragraph in this bill also provides that unless a loaded car makes an average distance of 60 miles a day from point of origin to destination, the road which issued the bill of lading or shipping bill must pay a penalty of \$1 a day and "all actual damages that the owner or consignee or party whose interests may appeal may sustain, including the cost of the court and a reasonable attorney's fee." There are many railways whose earnings on a carload of freight would be less than \$10, representing their proportion of the through rate, and yet because they issued the receipt and accepted the freight (compulsorily) and moved the car say 10 miles, they may be compelled to defend themselves before the courts, pay out a large sum as damages and costs of court; their only redress being in turn to sue their connecting line or lines for reimbursement. A truly liberal manner of settlement, compelling the innocent to pay for the crimes of the guilty, and look to the offender for the return of their outlay.

It has been the effort of the people of the United States in years past to prevent rebates and discriminations of this nature, and yet the Madden bill carries with it possibilities of discrimination beyond computation. Fictitious damages could be paid as an inducement for continued business; during slack seasons cars could be loaded and delayed in transit purposely in order to give the semblance of justice to such

settlement; empty cars could be ordered with the understanding that they would not be placed for a certain length of time, and the reciprocal demurrage which would then be claimed would represent the difference between the correct tariff toll and the toll agreed upon. Again, the railway companies could not live unless they were prepared to defend themselves against all fictitious claims for damages, etc., under such a bill, and with the hundreds of thousands of shippers and consignees along any trunk line a legal department so greatly in excess of the present requirements would have to be maintained that the cost of such protection would naturally increase the total cost of operation. This total cost of operation can only be offset in one way—by freight and passenger earnings—and anything which tends to increase operating expenses must result in increased freight and passenger tolls. From the viewpoint of the advocates of this bill, reciprocal demurrage is a case of "Heads I win, tails you lose."

GRAIN INSECT PESTS.

The best place to fight the insect pests that destroy grain is on the farm; and this season in particular there is need of especial precautions to see that this is done, and, on the part of dealers, to keep a close lookout for the pests in the grain as it comes from the farm.

"The principal damage done by these pests occurs in bins and granaries, although in the South considerable injury results from infestation of standing corn and of small grains in stack. Some such damage has been done to stacked wheat in Kansas this year," says Geo. A. Dean of the Kansas Agricultural College.

"Of the twelve or thirteen species of beetles attacking stored grains, not more than five or six are commonly found at work in the farmers' bins. To these may be added four species of small moths, of which the angoumois grain moth is the most serious pest attacking ripened corn, and the meal moth and the Mediterranean flour moth the serious ones in meal, bran or any of the ground grain products. The farmer applies the term 'weevil' to all of these insects and distinguishes the moth by the term 'fly weevil.' All are of small size, none of the beetles exceeding five-eighths of an inch and the most of them being less than one-fourth of an inch long, reddish, black or brown in color. The moths are tiny 'millers,' and their work in the bins and granaries may be distinguished from that of the beetles by the presence of web or silk in the grain, bran, meal or flour.

"To avoid infestation in the stack, the grain should be thrashed as soon after harvesting as practicable. Fresh grain should not be exposed to attack by being placed in bins or granaries with that already infested. Before storing, the old grain should be removed and the floors, walls and ceilings of the bins thoroughly cleansed. Cleanliness is very important in preventing injury by these insects. Dust, dirt, rubbish, refuse grain, flour and meal serve as breeding places. Frequent agitation or handling of the grain will destroy many of these moths, because they are unable to free themselves from a mass of it and perish in the attempt.

"Fortunately, it matters little what species may be causing the trouble, for all succumb to the same treatment. The simplest, most effective and inexpensive remedy for all insects infesting the farmers' grain stored in tight bins is careful fumigation with carbon bisulphide.

"The amount of liquid to be used depends upon the size of the building, on its tightness and the nature of the attack. If the building is reasonably tight and the infestation slight, one pound of carbon bisulphide is sufficient for every 700 cubic feet of space or one pound for every 100 bushels of grain. In case the building or bins are not sufficiently tight to allow thorough fumigation, the amount of the liquid should be doubled or even tripled. If the insects are beetles and are very abundant, the liquid should in every case be doubled.

"The building and bins must be made as nearly air-tight as possible in order that the vapor may remain in all parts of the space in full strength and for the required time. The vapor must enter all cracks and crevices by diffusion. The doors and windows should be arranged so they can be opened from the outside when fumigation is completed. Care should be taken to have everything ready and in its place, so that after the first vessel has received its liquid it will be unnecessary to stop to adjust anything. Everything should be done to avoid unnecessary delays and to facilitate the rapid evaporation of the liquid.

"The liquid should be placed in shallow pans or dishes as high as possible in the bins or building, since the vapor is heavier than air and set-

ties to the lower parts. It should be well distributed, having not more than a half pound in a place. In large bins, to hasten and to equalize the operation, it is well to put a quantity of the liquid in the center of the grain by thrusting into it a gas pipe, loosely plugged at one end, down which the carbon bisulphide may be poured and the plug loosened with a rod. The liquid may be applied directly in this manner to infested grains or seeds without injuring their edible or germinative qualities.

"If a building of more than one floor is to be fumigated, the operator should begin on the first floor and work upward, and after placing the liquid in the second story leave the building through a window that he can close after him. If impossible to get out from the upper story, the carbon bisulphide should first be distributed there, working downward as rapidly as possible to avoid the settling vapor.

"The bins or building should be allowed to fumigate from twenty-four to thirty-six hours. The best plan usually is to apply the liquid on a Saturday afternoon and leave the building closed until the following Monday.

"Doors and windows should be opened wide and the building or bins aired thoroughly one or two hours before entering. Slight traces of the odor will linger in corners and other places where the air does not move freely, but these will gradually disappear.

"The vapor of this liquid is highly inflammable and explosive. No fire or light of any sort should be allowed about the building while the fumigation is in progress. The application should always be made in daylight, for artificial light of any kind is dangerous. Electric lights must not be used, since when turning them on or off there is always danger of producing a spark. Nor is it safe to have heat of any kind in the building while the fumigation is in progress."

Elevator owners whose premises may have become infested with insects will be able to gain from the above all the information necessary for their speedy and cheap destruction.

ILLINOIS CORN SHOW.

The big corn show of Illinois this year will be held at Springfield on November 23 to 28.

The main exposition hall will contain the exhibits of corn, the commercial exhibits of by-products, the corn kitchen, the prizes and a collection of old-fashioned farm implements. The annex, which is a tent 100 by 160 feet, will contain the Indian Village and the county and district school exhibits of corn. Two additional tents will be erected to house other exhibits and the collection of fowl.

The Ojibway Indians, of whom there will be fifteen present, have arranged an elaborate program which will include among other of their rites the religious ceremony of the corn harvest. In connection with the village there will be a very complete collection of Indian equipment consisting of buffalo hide tepees, a corn shuck tepee, basketry, rugs and cooking utensils. They will each day make corn bread after the native fashion and will distribute it to the visitors.

The game birds and waterfowl exhibits will be by the Grain Commission and by an expert who had charge of these features at the New York Sportsmen's Show. This exhibit is expected to be the finest thing of its kind ever attempted in the West. Among the game birds will be the pinnated grouse, or prairie chicken, our native quail, Mexican quail, California quail, Hungarian partridge, English and Chinese ring-neck pheasants, Mongolian, golden, silver, Lady Amherst, Manchurian, Impeyan, Melanote and Reeves pheasants, etc.

Among the waterfowl will be the Canadian wild geese, African geese, Egyptian geese, Mandarin or sacred duck of China, the disappearing wood ducks and the mallard, widgeon, pintail, canvasback and redhead varieties.

The Chamber of Commerce of Portland, Ore., recently shipped the standard type samples of 1908 wheat to foreign grain exchanges. This season there are six different classes—red Walla Walla, white Walla Walla, bluestem, brewing barley, feed barley and feed oats. The packages, of which there are several hundred, are sent out by express on receipt of orders.

The grain dealers of Indiana have organized the Plymouth District of Grain Dealers' Association, affiliating with the state association. The district comprises Marshall County and the contiguous portions of St. Joseph, Laporte, Elkhart, Kosciusko and Starke counties. R. A. Koontz of Argos, Ind., is president, and M. I. Hosler of Walkerton, secretary and treasurer.

The popularity of an article is shown by the users thereof.

Some of the largest grain firms in the United States are using the

ELLIS GRAIN DRIER

Their experience is that it conditions grain in a perfect manner and at minimum cost.

That will be your experience if you install an Ellis Drier.

Let us write you full particulars.

ELLIS DRIER CO.

747 Postal Telegraph Bldg.

CHICAGO

LATE PATENTS

Issued on October 13, 1908.

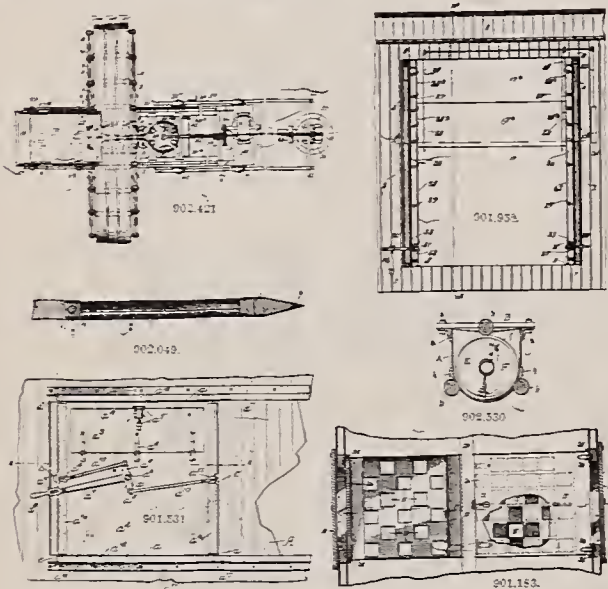
Grain Car.—James T. McNally, Chicago, Ill. Filed December 21, 1907. No. 901,183. See cut.

Issued on October 20, 1908.

Grain Car Door.—Theodor Gerdes and George E. Wilken, Danforth, Ill. Filed February 28, 1908. No. 901,531. See cut.

Issued on October 27, 1908.

Grain Door for Cars.—John Edman, Minneapolis, Minn., assignor of one-eighth to Charles Dahl, one-fourth to Alfred M. Horland, and one-eighth to Edward G. Dahl, Minneapolis, Minn. Filed May 8, 1907. No. 901,959. See cut.



Sampler for Granular Material.—Harold D. Bonnell, Norfolk, Va. Filed November 6, 1907. No. 902,049. See cut.

Conveyor.—William K. Liggett, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Co., Columbus, Ohio. Filed January 30, 1906. No. 902,421.

Conveyor.—Charles O. Gustavsen, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Co., Columbus, Ohio. Original application filed April 27, 1906. Divided and this application filed February 5, 1907. No. 902,530. See cut.

Issued on November 3, 1908.

Smut Machine.—Richard M. Holland, Elkton, S. D. Filed May 27, 1907. No. 902,658.

AN ESSAY ON CORN.

The entry of South Africa as a competitor in the grain markets of England and Europe where maize is concerned has drawn attention to this interesting product. The mealie, as it is termed in South Africa, is nothing more or less than the grain of a large and graceful grass known in the botanical world as *zea mays*, says the encyclopedist of the London Miller. Long and learned discussions have taken place as to the native home of this cereal; it appears, according to the best evidence, that its birthplace was Mexico. Mexican tombs have been found to contain the seeds of maize, and Darwin also discovered the grain deeply embedded in the soil of Peru. The plant attains in maturity the height of 6 or 7 feet, and the young and succulent stem is much sought after by horses and cattle.

Mealie meal converted into porridge is the staple food of the South African native, and not only bread but cakes are prepared from the meal mixed with a percentage of wheaten flour. In this country the yellow round variety (as it is technically called) finds much favor with poultry farmers, and in many parts of the country it is used for rearing pheasants or grouse. Before it reaches maturity the cob, when boiled, makes a most appetizing form of vegetable.

During last year the export of maize to the Continent was even greater than to England, it being largely used in Germany and Holland in the manufacture of gin. In the East Indies the inner covering of the cob takes the place of cigarette papers, and it has been used as an effective protection for pineapples exported from South Africa. Experts have given it as their opinion that what is known as the large white Natal Hickory King is the best grain yet placed upon the market, and it appears that the soil of South Africa is the best that can be found for growing this profitable cereal.

For Sale

[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

ELEVATORS AND MILLS

FOR SALE.

Elevators in Illinois and Indiana that handle from 150,000 bushels to 300,000 bushels annually. Good locations. Prices very reasonable. Address JAMES M. MAGUIRE, Campus, Ill.

FOR SALE.

Elevator and feed mill, with coal business, in Michigan. Doing good business. Good reasons for selling. Address

M. M., Box 9, care "American Elevator and Grain Trade," Chicago, Ill.

LINE OF GRAIN ELEVATORS AND CLEANING HOUSE.

One of the best lines of grain elevators and cleaning house in Minnesota, on good line of railroad, at the low price of \$60,000. Owners wish to retire from the grain business. Splendid grain-buying points and also coal business in connection. Address

J. D. MILLER, Endicott Bldg., St. Paul, Minn.

FOR SALE.

Elevator for sale at Holder, Ill. Rebuilt in 1902; all new machinery; 12-horsepower Charter Engine. Capacity 28,000. Ground leased from L. E. & W. R. R. Co. Also an elevator at Fullerton, Ill., built in 1903. Ten-horsepower Charter Engine. Capacity 22,000 bushels; cribs for 5,000 bushels ear corn. Elevator is on owner's ground. Address

JOHN Y. CHISHOLM, Trustee, Bloomington, Ill.

FOR SALE OR LEASE.

A mill making brewers' grits, fine corn meal and hominy. One of the most complete corn produce plants in the United States, at Portsmouth, Ohio, city of 30,000 at the foot of the famous Scioto Valley, the largest corn producing valley in Ohio; established trade, export and local. Will sell at a big bargain or lease for term of years. Terms to suit prospective buyers. Must be sold at once. Write or wire

H. S. GRIMES, Pres. the Portsmouth Cereal Co., Portsmouth, Ohio.

MACHINERY

ENGINES FOR SALE.

Gasoline engines for sale, 5, 7, 10 and 20 horsepower.

TEMPLE PUMP CO., 15th Place, Chicago, Ill.

FOR SALE AT A BARGAIN

Several old-style No. 3 grain separators. New; never been used. Need the room and will close out cheap.

JOHNSON & FIELD MFG. CO., Racine, Wis.

GASOLINE ENGINE BARGAINS.

One 6-horsepower Fairbanks, \$125.
One 4-horsepower Fairbanks, \$90.
One 2-horsepower Fairbanks, oil cooled, \$75.
One 2-horsepower Fairbanks, Jack of All Trades, \$60.

One 8-horsepower Howe, nearly new, \$150.

One 10-horsepower Waterloo, \$100.

One 10-horsepower Webster, \$100.

One 12-horsepower Webster, \$150.

One 12-horsepower Fields Engine, new, \$334.

One 15-horsepower Fields Engine, new, \$391.

ALLEN P. ELY & CO., Omaha, Neb.

FOR SALE.

One No. 37 Howes Oat Clipper, good as new. Address

THE ADY & CROWE MERCANTILE CO., Denver, Colo.

MONEY IN YOUR POCKET.

If you want to change that second-hand machine into money advertise it in this department. Or if you have a grain elevator to sell or rent, or wish to buy, make your wants known through these columns.

SCALES

SCALES FOR SALE.

Scales for elevators, mills, or for hay, grain or stock; new or second-hand at lowest prices. Lists free.

CHICAGO SCALE CO., 299 Jackson Boulevard, Chicago, Ill.

Miscellaneous Notices

[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

WANTED.

Second-hand steel storage tanks for grain. Give full particulars and location. Address

STORAGE TANKS, Box 11, care "American Elevator and Grain Trade," Chicago, Ill.

ELEVATORS WANTED

WANTED.

Elevator or mill and elevator for good improved Illinois or Iowa farm. Address

IOWA, Box 1, care "American Elevator and Grain Trade," Chicago, Ill.

GRAIN AND SEEDS

WANTED.

Milling buckwheat wanted. Address

H. H. EMMINGA, Golden, Ill.

WE OFFER.

Buckwheat feed for present and future shipment.

H. J. KLINGLER & CO., Butler, Pa.

FOR SALE.

Clover seed for sale. Name quantity and grade wanted. Address

H. H. EMMINGA, Golden, Ill.

JAPANESE BUCKWHEAT.

Recleaned Japanese buckwheat, dry and cool. Write for samples and prices.

H. B. LOW & SON, Orangeville, Pa.

ALFALFA MEAL FOR SALE.

We are booked ahead on alfalfa meal. Let us send you sample and prices delivered. Address

F. G. OLSON GRAIN CO., Wichita Kan.

KAFFIR CORN.

We will ship 100,000 bushels of Kaffir corn this season. Destination weights and grades guaranteed. Get your Kaffir direct from where it is grown. Write to

J. C. HAINES & CO., Augusta, Kan.

BUCKWHEAT WANTED.

We are always in the market for sweet, sound buckwheat—either car or bag lots. Send samples of what you have to offer.

D. GRATZ & SON, Tecumseh, Mich.

GRAIN RECEIVERS

DETROIT

A. S. DUMONT R. C. ROBERTS R. L. HUGHES

Dumont, Roberts & Co.
RECEIVERS GRAIN SHIPPERS

Chamber of Commerce
DETROIT, MICH.
Consignments Solicited.

Merchants Exchange
DECATUR, ILL.
Ask for our Bids and Quotations.

CAUGHEY & CARRAN

DETROIT, MICH.

Grain and Seed Merchants and Commission

OUR SPECIALTY: OATS AND CLOVER SEED

We handle Beans, Barley, Rye, Corn, Wheat. Try us. Liberal advances

OFFICES: 620 to 624 Chamber of Commerce

ELEVATOR and SEED HOUSE: Corner 14th and Baker Sts.

FREMONT

Nye, Schneider, Fowler Co.

GRAIN DEALERS

Corn for Feeders. Milling wheat a specialty,
both winter and spring. Write for samples
and prices. Shipment via C. & N. W. R. R.

General Offices, FREMONT, NEB.

CAIRO

H. L. Halliday Milling Co.

RECEIVERS AND SHIPPERS

CORN-WHEAT-OATS

CAIRO, ILLINOIS

REDMAN, MAGEE CO.

GRAIN

DELTA ELEVATOR Cairo, Ill.

ROOFING AND SIDING.

SYKES STEEL ROOFING CO.

114 W. 19th Place, Chicago

MAKERS OF FIREPROOF WINDOWS

WE manufacture all gauges of cor-
rugated iron, either painted or
galvanized. We make Patent Cap Roof-
ing, Roll Cap Roofing, "V" Crimped
Roofing, Metal Ceilings, etc., etc.

We make a specialty of

**Corrugated Iron and
Metal Roofing
For Grain Elevators**

And take contracts either for material alone or job com-
pleted. Write us for prices. We can save you money.

MILWAUKEE

O. MOHR, Mgr. G. C. HOLSTEIN, Sec'y-Treas

Mohr-Holstein Commission Co.

29 Chamber of Commerce

MILWAUKEE

Sample Grain a Specialty

BRANCH OFFICES AT CHICAGO, MINNEAPOLIS

CHICAGO MINNEAPOLIS

J. V. LAUER & CO.

Grain Commission

BARLEY A SPECIALTY

Ship us your next car

Chamber of Commerce MILWAUKEE, WIS.

The Franke Grain Company

Receivers and Shippers of

GRAIN AND MILL-FEED

Rooms 43-44 Chamber of Commerce
MILWAUKEE, WIS.

OUR SPECIALTIES:

Malting Barley

Milling and Distilling Rye

FAGG & TAYLOR, Shippers
MILWAUKEE, WIS.B. G. ELLSWORTH, President H. H. PETERSON, Vice-President.
E. H. HIEMKE, Secretary

L. Bartlett & Son Co.

GRAIN

COMMISSION MERCHANTS

Room 23 Chamber of Commerce Building

MILWAUKEE, WIS.

NEW YORK CITY

BROOKLYN HAY & GRAIN CO.

HAY, STRAW AND GRAIN

COMMISSION MERCHANTS

ON ALL MARKETS IN NEW YORK HARBOR

Office: Borough of Brooklyn, New York

PITTSBURG

D. G. Stewart & Geidel

GRAIN, HAY AND FEED

RYE A SPECIALTY

Office 1019 Liberty St.

Pittsburg, Pa.

Proprietors Iron City Grain Elevator. Capacity

300,000 bu.

HAY and GRAIN

We want to hear from shippers of hay and grain.
Our direct service to large consumers in this
district enables us to get top prices for good
shipments. Liberal advances to consignors.

DANIEL McCAFFREY'S SONS CO.

PITTSBURGH, PA.

References: Washington Nat. Bank. Duquesne Nat. Bank.

ST. LOUIS

Daniel P. Byrne & Co.

General Commission Merchants

SUCCESSORS TO

Redmond Cleary Com. Co.

Established 1854

Incorporated 1887

Grain, Hay, Mill Feed and Seeds

Chamber of Commerce, St. Louis, Mo.

SLACK-FULLER GRAIN CO.

RECEIVERS AND SHIPPERS

OF

GRAIN

CONSIGNMENTS SOLICITED

208 Merchants' Exchange ST. LOUIS, MO.

Ship your Grain, Hay and Seeds to

John Mullally Com. Co.

St. Louis, Mo.

Best of attention paid at all times to all consignments.
Members St. Louis Merchants' Exchange and Chicago
Board of Trade

J. L. Wright
W. H. Wright
C. L. Wright

We Buy to Arrive

J. L. WRIGHT GRAIN CO.

Chamber of Commerce

St. Louis, Mo.

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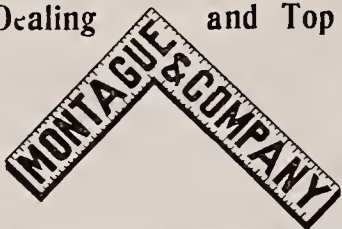
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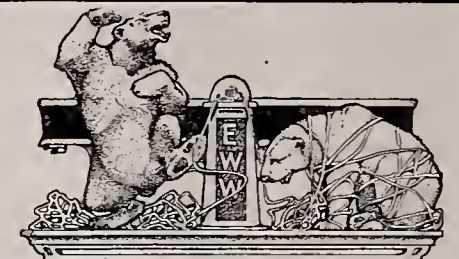
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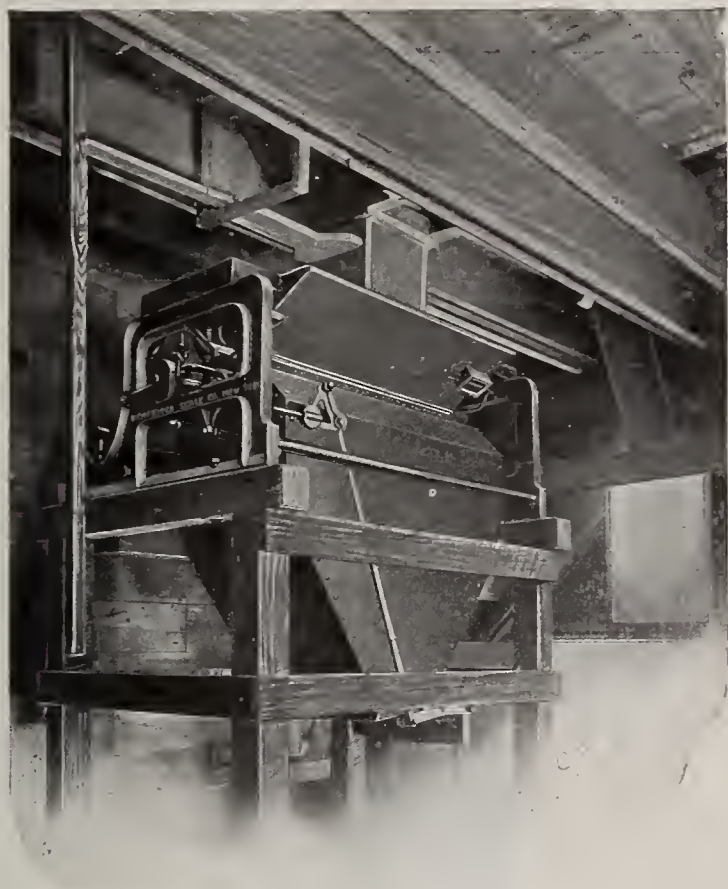
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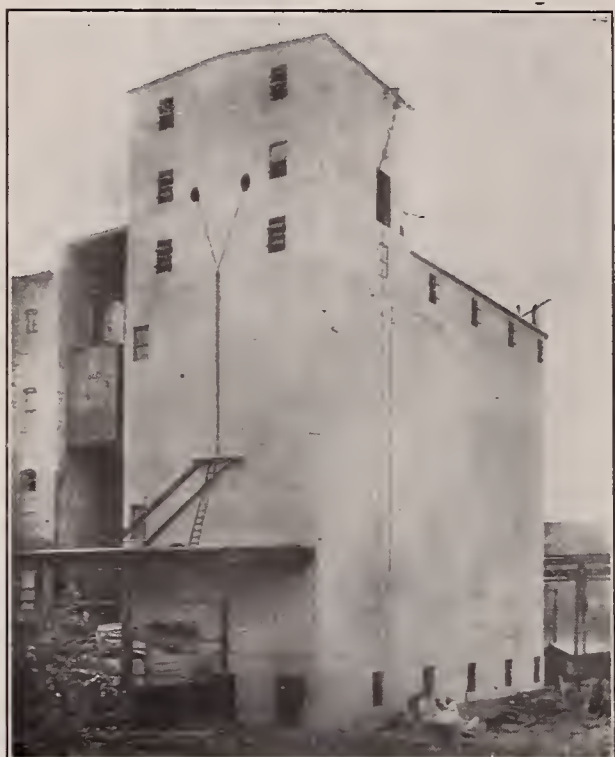
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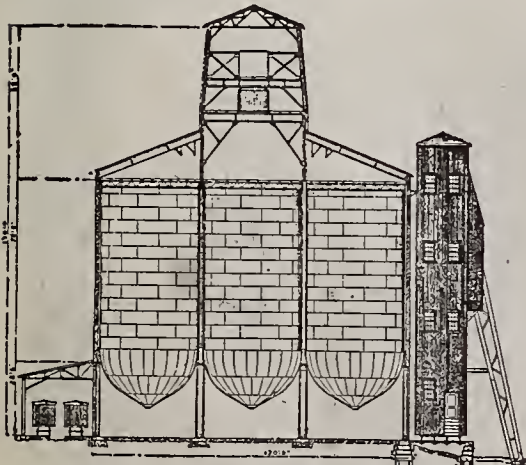
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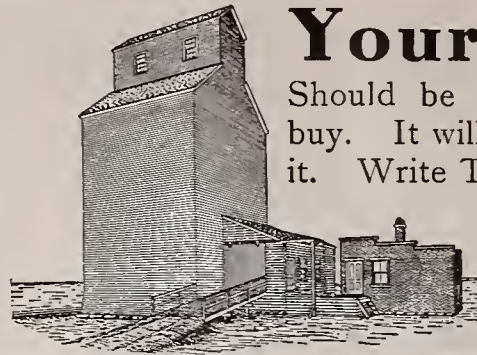
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 Face value of notes..... 1,451,877.89
 Cash assets 300,148.96

D. R. SPARKS, President **A. R. McKINNEY, Secretary**

CHICAGO AGENT

M. W. FUGIT, 740 National Life Building

MILL OWNERS' MUTUAL FIRE INSURANCE COMPANY

DES MOINES, IOWA
 ORGANIZED 1875

Insures Mills, Elevators, Warehouses and contents.

Net Cash Assets, \$ 266,243.81
 Losses Paid, - 1,339,403.60
 Saved to Policy Holders,
 \$1,752,149.12

J. G. SHARP, Secretary



DUST! DUST! GIBBS DUST PROTECTOR is invaluable to operatives in every industry where dust is troublesome. It has been thoroughly tested for many years in every kind of dust, and is the most reliable protector known. Perfect ventilation. Nickel-plated protector, \$1, postpaid. Circular free.

Agents wanted. **GIBBS RESPIRATOR CO., "B," 124 East Ave., Oak Park (Chicago), Ill.**

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CHICAGO, - - ILL.
 CHARTERED 1865

Insurance with a maximum of security at a minimum of cost for **ELEVATORS, WAREHOUSES and CONTENTS**, on the Mutual Plan.

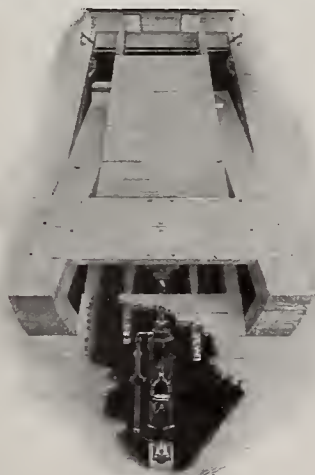
Five-Year Policies (or short term policies on grain, if required).

Semi-Annual Assessments, costing about one-half Stock Company rates.

No conflagration hazard.

Gross Assets, - - \$4,937,625.96
 Net Cash Surplus - 883,105.27

Reliance Automatic Dump Controller



This device is the only Automatic dump controller on the market that requires neither hand nor power to operate.

It causes the dump to settle down easily without the least jar or jerk and prevents accident to wagon or team.

This device is a small cylinder filled with cold tested oil in which travels a piston which is attached to the front end of the dump. The motion of the dump is controlled by the forcing of this oil through a regulating valve, which can be adjusted to suit operator.

Equip your dumps with them and avoid accident in the handling of the coming crops. Shipped on trial to responsible parties. Write us for particulars and price.

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The Old Reliable



Has unrivaled facilities for handling
Permanent and Short Term Orders

Open Policies and Grain Schedules

Our Specialty

LOW COST and PROMPT SERVICE
 Our Motto

A. D. Baker, Secretary, LANSING, MICH.

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THE ALBERT DICKINSON CO.

.....DEALERS IN.....

GRASS SEEDS, CLOVERS, FLAX SEED, LAWN GRASS, BEANS, PEAS, POP CORN, BIRD SEEDS, BUCKWHEAT, BAGS, ETC.
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HANDLES BARRELS, BOXES, BAGS and GENERAL FREIGHT.

ELEVATING CAPACITY:
 600 PACKAGES HOURLY.

Equipped with special inclined unloading and traveling fingers.

If interested ask for Catalogue 72A. FREE.

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COLUMBUS, OHIO. U. S. A.
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ALWAYS FILL THE BILL

Starts without cranking. Patented features make it more durable, smoother running, easier working than ordinary engines. Automatically adjusts itself—a light impulse for light work—powerful impulse for heavy load—saving fuel, wear and tear. Sold for twenty years. Thousands in use. Tell us what you will use it for, and we will recommend size and give price.

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Fails to work when you most want it, when you are in a rush. You're disappointed, when your hopes are high. You are displeased, disgusted, mad, every time it happens. You know that any body would be; he would not be human if he were not, to have his plans suddenly thwarted, leaving him impotent.

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HALL NON-CHOKABLE BOOT

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We freely advertise the fact that "AMERICAN" Transmission Rope is probably the highest priced rope on the market, because we know that the value is there. If a rope user wants cheap rope, he should buy some other brand than "AMERICAN."

Those who have tried other brands have generally come to us in the end and found that "AMERICAN" Rope is the cheapest in the end because it is the most durable and in all ways the best.

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THE CUTLER STEAM DRYER

SOLD BY ALL MILL FURNISHERS

Not an Experiment. In successful use 25 years drying
CORN MEAL AND HOMINY,
BREWERS' GRITS AND MEAL,
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ALL CEREAL PRODUCTS.

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Are interested in all phases of the grain business, the milling as well as the marketing of grain. They aim to keep in touch with the consuming trade and know what becomes of their grain in the markets of the world. Such men find the

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Show the value of any number of bushels or pounds of
WHEAT, RYE, OATS, CORN or BARLEY
at any given price from 10 cents to \$2.00 per bushel.
One of the most useful books ever offered to millers.
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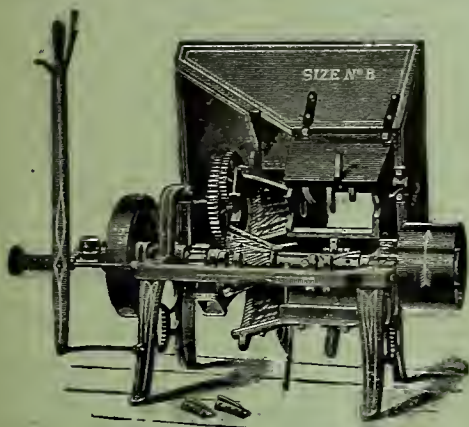
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It CRUSHES ear corn (with or without shucks) and GRINDS all kinds small grain and KAFFIR IN THE HEAD. Has CONICAL shaped GRINDERS, DIFFERENT FROM ALL OTHERS. RUNS LIGHT. Can run EMPTY WITHOUT INJURY. Ahead of rolls or stones in speed and quality of work.

YOU NEED a mill now. QUIT THINKING about it. COMMENCE to investigate. Give US a chance and we'll tell you WHY we think ours is the best.

SEVEN SIZES: 2 to 25 H. P.

Circular sent for the asking.

Drive pulley overhung. Belt to it from any direction. Makes complete independent outfit.

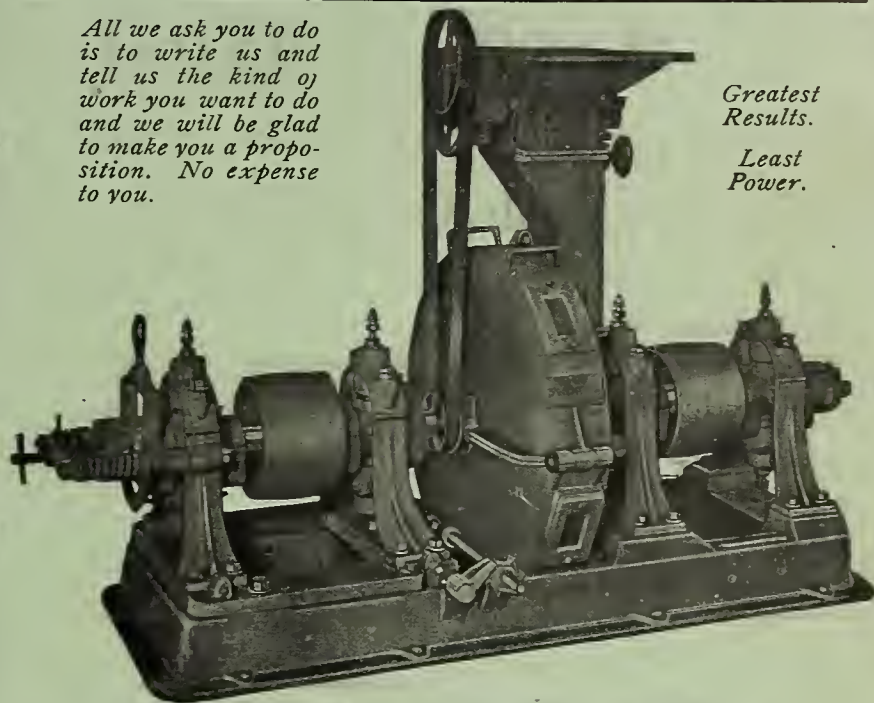
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Greatest Results.

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Built for FAST, FINE GRINDING. Grinds Corn, Chop Feed, Bran, Offal, Screenings, Small Grain and a great variety of other products.

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HIGHEST DEVELOPMENT OF AUTOMATIC WEIGHING



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Has sealed standard weights and graduated beam and can be balanced and tested at any time without dumping.

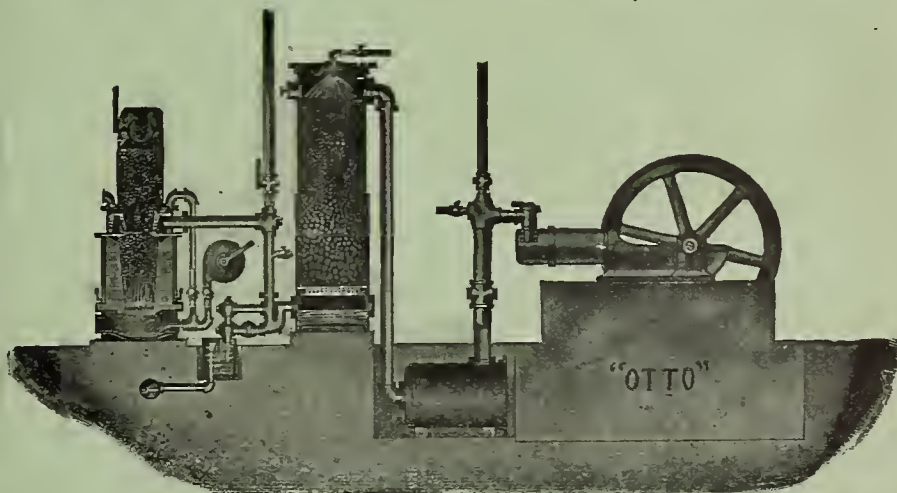
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Also Gas, Distillate, Alcohol, Kerosene, Naphtha,

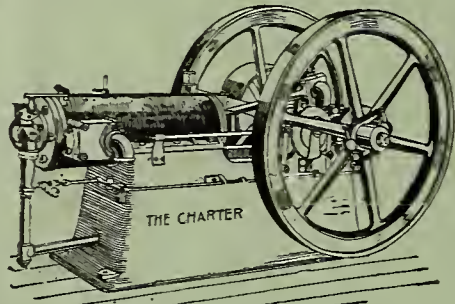
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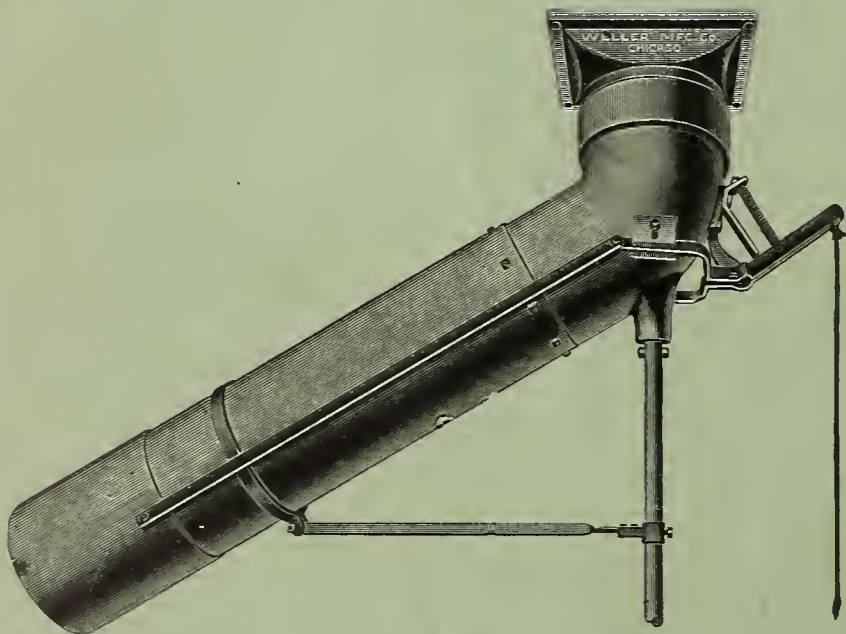
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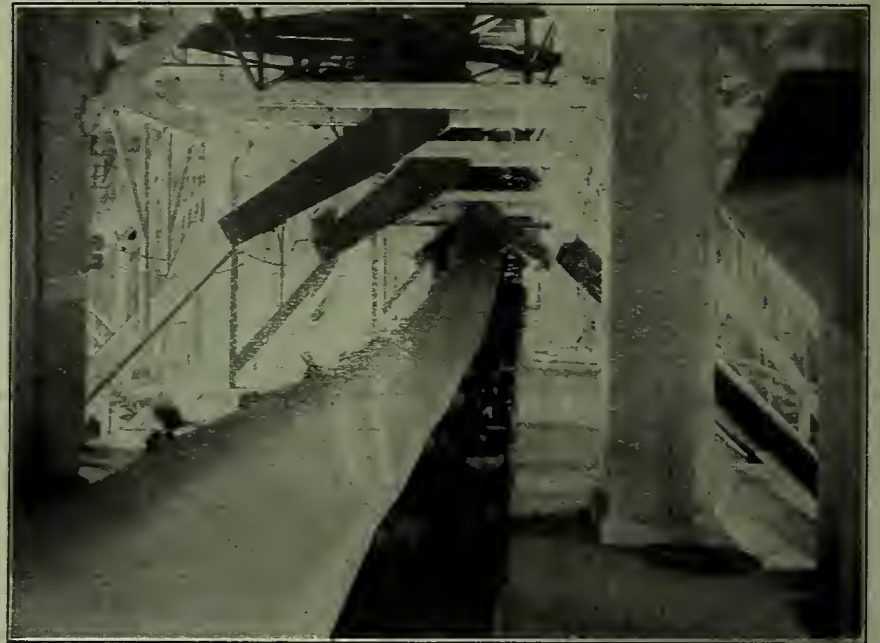
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